DOCUMENT RESUME

ED 344 576 IR 015 524

TITLE	Learning Connections: Guidelines for Media and Technology Programs.
INSTITUTION	North Carolina State Dept. of Public Instruction, Raleigh. Media and Technology Services.
PUB DATE	Jan 92
NOTE	302p.
PUB TYPE	Guides - Non-Classroom Use (055) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC13 Plus Postage.
DESCRIPTORS	Budgeting; *Educational Media; Educational Planning; Educational Resources; *Educational Technology; Elementary Secondary Education; *Learning Resources Centers; *Media Specialists; *Program Development; Resource Materials; *School Libraries; Staff Development
IDENTIFIERS	North Carolina

ABSTRACT

This report is designed to serve as a guide and reference source for media and technology professionals across North Carolina in response to the continuing changes in educational and media technology in school library media centers. The report provides information on program development, staff development and personnel, budgeting, information resources, and facilities, and demonstrates the changing role of the media coordinator and other media and technology professionals in the school culture. Much of the information in this report is generic in nature with emphasis on program planning and assessment for the effective use of personnel, resources, budget, facilities, and system-level services. Divided into seven chapters dealing respectively with program, planning and assessment, resources, budget, facilities, personnel, and system-level, the report provides a comprehensive examination of ways in which learning resources centers can support, complement, and enhance educational goals. The seven appendices correspond to the individual chapters, and contain bibliographic information, tips for success, planning guides, relevant guidelines, checklists, equipment requirements, and schedules. An alphabetical subject index is also provided. (DB)

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LEARNING CONNECTIONS:

GUIDELINES
FOR MEDIA AND TECHNOLOGY PROGRAMS

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NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION
BOB ETHERIDGE, STATE SUPERINTENDENT

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LEARNING CONNECTIONS:
GUIDELINES FOR MEDIA AND TECHNOLOGY PROGRAMS

DIVISION OF MEDIA AND TECHNOLOGY SERVICES
NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION
BOB ETHERIDGE, STATE SUPERINTENDENT

JANUARY, 1992

FOREWORD

Of all the efforts of any society, the most important is the educating of its citizens. North Carolina schools are changing to meet the challenges of the 21st century and nowhere are these changes more evident than in the area of media and technology. The challenge that confronts North Carolina educators today is to find ways to use the enormous promise of technology, which has been so effective in making business and industry more productive, to increase efficiency, effectiveness, and equity in the educational process.

School library media programs are at the heart of learning in today's educational settings. Computers, laser-disk players, CD-ROM, and satellite receive dishes are as common in many school library media programs as the more traditional books and periodicals. It is hoped that *Learning Connections: Guidelines for Media and Technology Programs* will serve as a guide and reference source for media and technology professionals across North Carolina as our school library media centers continue to change and set the pace for learning into the next century.

Bob Etheridge

Bob Etheridge
State Superintendent of Public Instructon

INTRODUCTION

Welcome to *Learning Connections!*

The sixteen year-old green notebook—*Media Program Recommendations*—has been overtaken by time and technology; we are moving rapidly into a new era of media and technology programs. This new day calls for revised frameworks, for new and expanded roles, for increased cooperation, for a new vision of the traditional school library media program. What follows in *Learning Connections* will not only provide updates on program, personnel, budget, resources, and facilities but, more importantly, will demonstrate the changing roles of the media coordinator and other media and technology professionals in the school culture.

As schools entered the 1990s, persons with special technical skills joined the ranks to work with existing library media professionals, expanding the school library media program as it has been known. Local school systems, of course, determine the types of positions and responsibilities of the people in these positions. As you read *Learning Connections*, you will see a variety of terms used to demonstrate the broad array of services that are part of media and technology in the schools today. The design and delivery of these programs have changed dramatically; therefore, a wide variety of school professionals can now benefit from these guidelines. The scope and intended audience of *Learning Connections* include:

Media coordinators
Computer teachers
Computer coordinators
Media supervisors
DLS facilitators
Media and technology directors
School administrators at all levels

Finally, this document has been closely aligned with new national guidelines entitled *Information Power*. Working together at the state and local level, we believe that *Learning Connections*, in tandem with the national guidelines, will provide you with the tools to help plan and build comprehensive learning environments for the 21st century.

Elsie L. Brumback

Elsie L. Brumback, Director
Division of Media and Technology Services

ACKNOWLEDGMENTS

Learning Connections: Guidelines for Media and Technology Programs is the latest revision of North Carolina's guidelines, formerly entitled, *Media Program Recommendations: Individual School/Administrative Unit.*

We welcome the opportunity to express appreciation to the following Task Force Members who contributed time, enthusiasm, and expertise to the development of this document.

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In addition, we extend a very special note of appreciation to Dr. Carol G. Lewis who served as the Department's Task Force leader during the revision process and to Bernadette McAllister for the many hours of technical office support.

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Program

INTRODUCTION

Media and technology programs are organized in a variety of ways in the schools of North Carolina—from comprehensive programs where all components are organized under one large program, with a system-level media and technology director administering the program, to individual building–level library media programs, each directed by a media coordinator, with no system–level media and technology professional—the latter being the minimal level of programming.

> *"We are on the threshold of a new age in which information processing skills and computer proficiency will be new basics and individuals will be expected to update their knowledge and skills on a continuous basis throughout their lives."*
>
> Gail A. Caissy
> 1989, p. 42

***Learning Connections** addresses media and technology programs from the broadest perspective. The term, **PROGRAM**, is used throughout this chapter to refer to whatever formal organization exists in your school system.*

Information retrieval, life-long learning, technology proficiency: these are but a few of the attitudes and skills that the public and the educational community expect from any media and technology program. As Caissy (1989) clearly indicates in her article, "Curriculum for the Information Age," literacy goes far beyond the traditional definition of "being able to read and write." By necessity, literacy implies the ability to survive in an information age, an age which is predicated upon the constantly changing environment in which information and ideas are presented. From books to video to microforms to computer programs, the challenge facing today's students and their teachers is monumental––to become effective users of ideas and information in all forms and variations (American Association of School Librarians and the Association of Educational Communications and Technology [AASL/AECT], 1988, p.1).

Indeed this challenge is specifically the mission of the media and technology programs. Every program should be designed to support, complement, and enhance the educational philosophy, goals, and locally-generated objectives of the district and school of which it is a part. Thus, while they may encompass many of the same elements, *no two programs will be identical.* Each will reflect the unique flavor of its particular school, teachers, students, and curriculum.

Consequently, while *Learning Connections* will offer myriad sample documents, programs, and guidelines for North Carolina media and technology personnel, its singular goal is to assist professionals across the state in providing the most effective programs for their individual schools, teachers and students.

Much of the information in this document will be generic in nature with emphasis upon program planning and assessment for the effective use of personnel, resources, budget, facilities, and system-level services so necessary for dynamic programs. The school media coordinator, with the help of other media and technology personnel, school administrators, Media Advisory Committee, teachers, students, parents and community, can create the program which reflects the school's unique goals, objectives, and needs.

MISSION

As we have said, the mission of the program is to ensure that students and staff are effective users of ideas and information. The program is designed to support, complement and enhance the educational philosophy, goals, and objectives of the district and the school. The mission is accomplished through the following goals:

GOALS

- Provide media and information-related services that are fully integrated into the instructional program.
- Provide access to a variety of resources which support the school curriculum and meet students' and teachers' needs.
- Teach information and computer skills and encourage effective use of information that enable students to become independent, lifelong learners.
- Promote the enjoyment of reading, listening, and viewing for students.
- Provide leadership in the use of instructional technologies.
- Participate in networks that provide access to information outside the school including other libraries.
- Promote all forms of literacy that enable students and teachers to live, work, and communicate in a democratic information society.

By design, media and technology programs assist students and adults in locating, accessing, generating, and using resources so that they may function more effectively as users and creators of information. Objectives for a quality program must be developed at the individual school to address the desired learning outcomes for the students in that school. The heart of the issue, however, rests in the professional's vision. An effective program is not an accident; it is more than just the teaching. A good program is a merger of people, services, resources, and management into a well-orchestrated agenda that translates the overriding school mission and goals into a broad-based plan of action.

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PARTNERSHIPS

An effective program depends on the collaborative efforts of all those who are responsible for student learning (ALA/AECT, 1988, p.21). Text-based instruction is rapidly being replaced by interdisciplinary, resource-based learning; learning that should develop into a way of life. Flexible approaches to instruction require creative thinking, financial commitment, and new educational alliances. Media and technology professionals must become partners in the instructional process if educational goals are to be realized. The beneficiaries of these collaborative efforts are the students who will learn and grow in a resource-rich environment.

> *The beneficiaries of these collaborative efforts are the students who will learn and grow in a resource-rich environment.*

Partners Within the School

A learner-centered approach to instruction focuses attention on the media and technology program as a vital instructional force that expands, supports, and complements classroom learning. An **integrated** program is the joint responsibility of teachers, administrators, students, support staff, parents, and media and technology professionals working together to accomplish objectives that support desired outcomes for students.

MEDIA ADVISORY COMMITTEE

Central to the development and implementation of a quality program is the formalized partnership known as the Media Advisory Committee (MAC). As the first line of communication affecting all areas of the program, the committee is part of the organizational structure of the school. Depending on the size of the faculty, the MAC can be a sub-committee of the school's site-based management team, the same site-based management team that deals with all areas of the school, or a separate committee. Under the leadership of the media coordinator, members of the committee include teachers from grade-levels or departments, other media and technology professionals, the principal, support staff, parents and/or community representatives, and students. The responsibilities of this representative body will vary from school to school; however, an emphasis on program development will ensure that the media and technology program is designed to meet the needs of all users (See **Media Advisory Committee** in the Program Section of the Appendix).

INSTRUCTIONAL TEAMING

When classroom teachers and media and technology professionals plan together, it is possible to cooperatively design units of instruction that use a variety of print and nonprint resources, as well as merge content with information and computer skills. This type of learning requires *time* to plan and implement activities jointly. Although time constraints are often seen as a deterrent to this process, some benefits to students that make the efforts worthwhile include:

- Practicing life-long learning skills by seeking information from all types of resources to solve relevant problems and answer questions
- Internalizing content information through active rather than passive learning
- Transferring the information and computer skills to a variety of situations

Media and technology professionals must be knowledgeable about the needs of special populations within the school community. Exceptional children benefit from the integrated approach of media and technology programs. (See **Services for Exceptional Children** in the Program section of the Appendix).

ADMINISTRATORS

As the instructional leader of the school, the principal sets the expectation for participation in media and technology programs. Personal involvement by the building-level administrators in program planning, budgeting, and participating in activities related to media and technology influences the value placed on the program by all others within the school. Likewise, system-level administrative support affects decisions and perceptions at the building level.

MEDIA COORDINATOR

The image of the media coordinator is a key element in the acceptance of the program as an indispensable resource for student learning. Effective interpersonal skills, combined with professional competence, project a positive image that allows this professional to function in the roles identified in *Information Power* (AASL/AECT, 1988)—**teacher, information specialist,** and **instructional consultant**.

OTHER MEDIA AND TECHNOLOGY PROFESSIONALS

The advent of newer technologies creates a need for personnel with specialized skills to join the team of professionals who are already partners in enhancing student learning opportunities. Although LEAs in North Carolina are free to choose the types of specialists they need, there has been a steady growth in numbers of computer teachers, computer coordinators and DLS facilitators in the last five years.

TEACHERS

New instructional approaches have emphasized the changing role of the teacher from knowledge provider to facilitator of learning. The information explosion has created the climate for movement beyond textbook-based instruction to a holistic concept of learning that relies on media resources for curricular needs. As partners with media and technology professionals, teachers can identify the appropriate resources and use them effectively in classroom instruction.

MEDIA, TEACHER, AND COMPUTER LAB ASSISTANTS

As significant contributors to the education of students, media, teacher, and computer lab assistants must understand the role of the media and technology program and work hand-in-hand with other partners to influence student learning.

STUDENTS

Students are at the heart of the program. Consideration of their developmental needs, learning styles, and levels of ability is critical when selecting resources and designing instruction. As primary recipients of media and technology services, students can also play an invaluable role in designing the program and extra activities, selecting resources, and selecting aesthetic treatments for the facilities. Depending on the grade level and maturity of students, interviews or questionnaires can give insight into the extent to which students believe the program is responsive to their needs. Flexible scheduling that provides continuous access to resources is one way to respond to developmental needs of students by giving opportunities to:

- Develop independence
- Explore new territory
- Become self-sufficient and responsible for actions
- Satisfy personal and content curiosity
- Develop language skills
- Interact with others
- Broaden the scope of available activities
- Conform to necessary rules of a larger group

PARENTS

At the forefront of student success in school is the influence of parents. Through positive interaction, media and technology programs must endeavor to engage parents in programs and activities affecting their children. Open house activities and written communications to parents can open the door to involvement in parent volunteer programs, special projects, and fundraising for the program. Special media collections for parents can support guidance programs which involve them in their children's experiences at school.

Partners Outside the School

Partnerships with public, academic, special, and community college libraries provide additional opportunities for instructional services. Before sending students to other libraries, it is imperative that school media coordinators make personal contact with library personnel and determine ways in which they can cooperate (See **Library Assignments: Tips for Success** in the Program section of the Appendix). Collaboration among these libraries may provide mutually beneficial results such as:

- Interlibrary loan/resource sharing
- Telephone/FAX reference services
- Special reading incentive programs
- Bibliographies and/or pathfinders
- Coordinated celebrations of special events
- Extended hours
- Brochures for parents and students
- Increased awareness of information sources
- Effective use of resources and respect for property

In addition to cooperation with other libraries, the school library media center can be the connection to other outside resources such as museums, businesses, community agencies and individuals, on-line services, and state agencies and resources.

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Communications and Public Relations

If partnerships are to continue, an aggressive marketing campaign—using both formal and informal methods of communication—must be employed to inform students, teachers, administrators, and the community about services, new resources, and activities surrounding the program. Brochures, newsletters, newspaper articles, posters, and memoranda are just a few methods that may be used to communicate information.

The importance of on-going interpersonal relationships between the media and technology professionals and all these partners cannot be overstated. Relationships must be built through positive daily actions and misunderstandings should be handled diplomatically and swiftly.

ACTIVITIES AND SERVICES

Embedded within any good media and technology program are activities and services all created and implemented with teachers' and students' informational needs at the forefront. Each one of these program components is vital to the success of a school's program regardless of grade level or philosophy. Listed in alphabetical order, these components are also used in the **Planning and Assessment** chapter as the foundation for designing a comprehensive program.

Curriculum Involvement

Media and technology professionals should be major players in the design and implementation of a school's curriculum. It is through curriculum involvement that they can influence how students develop information and computer skills to prepare them to successfully work in an information society and to acquire a technique for lifelong learning.

Educators are taking a close look at the delivery of instruction and are exploring ways to restructure the environment in which teaching and learning take place. Whole language, literature-based instruction or resource-based instruction/learning is gaining acceptance as a philosophy of learning that gives new vitality to instruction. Although these terms have been defined in a variety of ways, the underlying philosophy is that students must experience learning as a "whole" rather than in segments. New instructional approaches have emphasized the changing role of the teacher. Teachers are decreasing their role as knowledge provider and emphasizing their role of knowledge facilitator or mediator/coach of the curriculum.

By including media and technology professionals in the curriculum planning and design stages, existing resources that support the new curriculum initiatives can be evaluated, realistic budget requests for new materials can be developed, and new programs can be incorporated into the collection development plans.

Media and technology professionals are an asset to curriculum teams because of their familiarity with the extensive range of resources available to support instructional and recreational learning. Their experience in using effective strategies for integrating these resources into teaching for learning are invaluable to planning teams. By including media and technology professionals in the curriculum planning and design stages, existing resources that support the new curriculum initiatives can be evaluated, realistic budget requests for new materials can be developed, and new programs can be incorporated into the collection development plans. This cooperation will ensure that sufficient resources are available when the new units of instruction are taught.

CURRICULUM DEVELOPMENT

Although North Carolina has a standard curriculum, local curriculum development to make the content relevant to students is encouraged. Media and technology professionals should be actively involved in the local curriculum development process to help determine what will be taught and to assure that information and computer skills are incorporated into the local curriculum process.

INSTRUCTIONAL DESIGN

Instructional design is a systematic process for developing an individual lesson plan or an entire unit of study. Through participation in instructional design, media and technology programs link appropriate resources to instructional plans. Although there are several advocates for instructional design models in the professional literature, a generic model is presented in the **Planning and Assessment** chapter.

Information Access

Information services provide intellectual and physical access to resources within and beyond the school site. Students and staff benefit from a variety of resources that express opinions from varied social, political, and cultural points of view. Assistance in the use of all resources should be available at the time of personal or instructional need.

Information services extend the classroom into the larger world of information.

Information services extend the classroom into the larger world of information, where additional concepts can be learned, where skills and concepts are applied to the use of diverse formats, and where media are interpreted, combined, or merged to communicate or solve problems.

Actions that promote information access include:

- Planned activities that require use of resources
- Flexible scheduling
- A balanced collection of resources
- Maintenance of an up-to-date, centralized catalog of resources
- A well organized facility
- Self-help procedures
- Prompt notification of new resources and services
- Extended hours of operation with staff available
- Resource sharing with other libraries and agencies
- Subject bibliographies and/or pathfinders

Information and Computer Skills Instruction

In North Carolina, information and computer skills instruction is identified in the ***Basic Education Program, Standard Course of Study****, and* ***Teacher Handbook: Library/Media & Computer Skills.***

Information skills instruction is basic to a comprehensive, unified school library media program. Students must develop skills which enable them to locate, assimilate, generate, and apply information to function successfully in the present and the future. Information skills instruction helps students become independent users and creators of a variety of resources and enhances their appreciation of mankind's recorded knowledge.

Literary enrichment is an essential part of effective information skills instruction. Carefully planned literary enrichment activities provide students with experiences that enable them to understand themselves and the world around them; providing them a basis for developing their own values and standards. Activities such as booktalking, story sharing, and creative dramatics should begin in pre-kindergarten and continue throughout every grade, ensuring that all students develop skills in appreciation.

As programs have expanded with the advent of newer technologies, programs have changed to include computer skills competencies not part of the past library media program. Computer skills instruction focuses on computer awareness (grades K-5), computer exploration (grades 6-9), and computer specialization (grades 10-12). Such instruction is designed to prepare students to be productive citizens in a technology-rich society. These skills are to be taught as part of the ongoing instructional program and as special units.

In North Carolina, information skills and computer skills instruction are identified in the *Basic Education Program, Standard Course of Study,* and *Teacher Handbook: Library/Media & Computer Skills*. These resources establish clearly defined skills to be taught and learned through a sequential K-12 curriculum. As students advance from grade to grade, information and computer resources become more specialized, and the depth of skills instruction increases in a cyclical fashion. Continuous review, reinforcement, and expansion of these skills improve a student's ability to independently use all types of information and computer resources—a goal of the media and technology programs.

Newer revisions of the *Standard Course of Study/Teacher Handbook* will consist of two separate curriculi: information skills and computer skills. This division of the previously combined library/media and computer skills curriculum will facilitate preparing students for the graduation computer proficiency mandated by the State Board of Education in May, 1991. This graduation requirement will begin with the Class of 2000, who will take the first computer skills assessment in 1995-1996 as eighth graders.

Competencies outlined in the *Standard Course of Study/Teacher Handbook* serve as a basis for identifying desired learning outcomes. Refer to these documents for guidance and suggested learning activities.

Media Production

The production component of a good program is multifaceted. As a vital part of both the information and computer skills curriculum, it offers a unique vehicle for students to translate traditional reading and writing skills into more artistic, creative formats to communicate information. Media production, whether paper- or video-based, also holds a lesson-expanding capability for the classroom teacher. Such activities as television production, multimedia production, and other audiovisual presentations appeal to many different learning styles. Media and technology professionals can use personal talents and other resources that may be available at the system-level or in the community to assist teachers with production of media for classroom presentations.

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Personal, Social, and Vocational Guidance

Whether it be through fiction, nonfiction, or current media, the personal quest for information is life-long. From the time children become aware of the world around them, they are seeking to expand and enhance their bases of experience through further information. Chock-full of materials of all kinds and on all subjects, which have been selected with a child's interests and developmental needs in mind, the school library media center offers an ideal safe haven for children and young adults as they begin to explore the world around them. Staffed by media and technology personnel and supported by an educationally enlightened administration and faculty, the school library media center is a place where an individual's right to information is respected and the quest for this information is nurtured rather than impeded.

The school library media center is a place where an individual's right to information is respected and the quest for this information is nurtured rather than impeded.

Nowhere is the *Library Bill of Rights* more in evidence than in this support for a student's need for personal, social, and vocational guidance (See **Library Bill of Rights**; **Access To Resources and Services in the School Library Media Program**; **Statement of Intellectual Freedom**; and **Freedom To View** in the Program section of the Appendix). Whether this search involves college choices, job opportunities, sexuality information, or help with dealing with peer pressure, each request is treated with respect as legitimate and appropriate.

Reading/Listening/Viewing Guidance

Going hand-in-hand with personal, social, and vocational guidance, reading/listening/viewing guidance is a vital component of the school library media program. Beginning with the careful selection of materials and culminating in the successful match-up of student (or teacher) with book and/or other media, this component of the program is predicated upon the media coordinator's knowledge of child development, the school's curriculum, current research about materials and formats, and the individual making the request. A major component of literary enrichment, reading/ listening/viewing guidance can include such activities as story sharing, booktalking, author calls, reading incentive programs, genre highlights, and a comparison of stories in different formats (print vs. video).

Effective reading/listening/viewing guidance also acknowledges the student's need to be challenged constantly to develop and expand their higher order thinking skills. Selections which encourage students to discern the subtle messages found within advertising and propaganda enable them to become discriminating readers, listeners, and viewers—skills necessary for survival in the information age.

Reading/listening/viewing guidance is not one-sided, however; student input can be solicited through interest surveys, reading response cards, and reading inventories. Making certain that this student element is included in the overall gestalt of a library media program enables the media coordinator to assist students, teachers, or parents in making the best choice of materials for student reading, listening, or viewing needs and interests.

Reference Services

Whether a resource-based unit using the information skills taught across the grade levels, a search for specific information for a class project or presentation, or a personal request for information, the school library media program revolves around reference service. A primary goal should be the eventual independent use of the collection by both students and teachers so that these users can control and be successful in their life-long search for information.

The resource-based unit or lesson plan is perhaps the most effective strategy to assist in this goal of independence. Ideally this unit is designed by both classroom teacher and media coordinator together so that the process of learning how to use the media center and its resources is integrated with what is taking place in the classroom. Thus students and teachers alike come to understand that the school library media center is an extension of the classroom that can expand and enhance the quest for knowledge (See **Planning With Teachers**; **Planning Guide for A Media Center-Based Research Assignment**; and **Steps in Unit Planning: A Teamwork Approach** in the Program section of the Appendix).

Implementation of a resource-based unit requires that students be allowed enough time to interact with materials until assignments are completed. Consequently, a flexible schedule is imperative if students are to learn and practice information-seeking skills without the extended interruptions in time that will require the re-teaching of essential skills (See **Flexible Scheduling** in the Program section of the Appendix).

Technology Services

Correlated with and yet expanded beyond media production is the media and technology professional's responsibility to help explain the use of media and equipment to students and teachers. Understanding that example is the most effective teacher, the media and technology professional models the use of technology to facilitate and enhance the management of the school library media program, to retrieve and use information, to support and extend the instructional program, and to demonstrate appropriate technology ethics.

As part of information skills and computer skills instruction, the media and technology professional teaches students to expand their information search and presentation through the use of media and technology resources. Accorded the responsibility of preparing students to enter into the technology-rich world of the 21st century, media and technology professionals constantly search for ways to broaden the media center's collection through the introduction of technologies that will not only enhance instruction and the individual information search, but prepare students to enter the technologically sophisticated world of higher education or work.

Staff Development

As part of the staff development component of a good school library media program, the media coordinator works with other media and technology professionals to introduce media and technology resources and their potential for classroom instruction and to encourage their experimentation, development, and use.

By the very nature of their profession, media coordinators are in an ideal situation to be aware of and understand a colleague's need for professional growth. Often the pointman for any introduction of new materials, technologies, or educational theory, the media coordinator as chair of the Media Advisory Committee has the opportunity to articulate to administrators the areas of need and, with the MAC, develop a plan for its implementation. Additionally, all media and technology professionals must continue to participate in learning activities designed to update and refresh basic skills and knowledge, as well as learn new concepts necessary for their ever-expanding roles.

Staff development opportunities can take the form of workshops, presentations, individual or group sessions, teaming with colleagues, inter/intraschool activities, hands-on utilization projects, and outside consulting. Staff development is discussed further in the **System-Level** chapter.

PROGRAM MANAGEMENT FUNCTIONS

To facilitate the growth and development of media and technology programs, basic underlying administrative practices must provide for the efficient management of the fiscal, real, and human resources. Simplified, user-friendly policies and procedures are necessary for a program that is built on service to the users. Anticipating responses for commonly occurring circumstances can limit the time required to resolve crisis situations and perform routines, so more time can be spent on services to students and teachers.

Planning and Assessment

Media and technology professionals must have a broad perspective of the interface between the school library media program, other media and technology programs, and all other instructional areas. Systematic planning and assessment, which involves all those that participate in the program, point to the influence of the program on student learning and quality teaching. Some areas that require planning and assessment include:

BUDGET

- Developing processes to match the budget with program objectives
- Establishing selection practices that allow the possibility of spending extra monies at a moment's notice
- Involving the Media Advisory Committee in budget decisions

FACILITY

- Arranging the facility for efficient use of space
- Indicating the need for capital improvements far enough in advance for the administration to take positive action
- Practicing routine and yearly housekeeping chores that contribute to good management and an appropriate learning environment

INSTRUCTION

- Determining convenient time to plan with teachers for resource-based instruction
- Involving media and technology professionals with curriculum planning teams
- Attending departmental/grade level meetings
- Considering the needs of all curricular areas when planning services
- Matching resources to the curricular requirements

PROGRAM

- Gathering input from students and teachers through surveys, questionnaires, and interviews to design and evaluate the program objectives
- Conducting and/or coordinating special events surrounding the program goals
- Offering services and/or programs for special audiences—i.e., exceptional children, at-risk students, gifted and talented, parent groups

Policies and Procedures

The development and periodic revision of written policies and procedures governing participation in media and technology programs are highly advisable. These can be part of the faculty and student handbooks or a separate publication. Information such as the following could influence the smooth operation of the program:

CIRCULATION

- Loan periods, materials and equipment to be circulated, and procedures for circulation
- Independent, self-help practices
- Special considerations—reserved materials, special requests, extended loan periods, interlibrary loan, etc.

STUDENT DISCIPLINE

- Stated support for school-wide policies
- Definitions of expected behavior and consequences of violations for individuals, small groups, and/or large groups

LOST, OVERDUE, AND/OR DAMAGED MATERIALS

- Procedures for informing students, teachers, and parents about lost/overdue/damaged items
- Personal responsibilities for lost/overdue/damaged materials
- Procedures for clearing lost/overdue/damaged records

MAINTENANCE AND REPAIRS

- Methods of informing media and technology personnel of problems with equipment and materials
- Methods of response to maintenance requests
- School and system-level procedures
- Procedures for discarding materials and equipment
- Warranties for new equipment
- Factors affecting decisions about replacement
- Annual maintenance procedures

ORIENTATION

- Regular orientation procedures
- Methods of orientation for new students and staff
- General topics included in standard orientation

STUDENT TRANSFERS

- Procedures for return of materials when withdrawing from school
- Consequences of failing to withdraw

SUBSTITUTES

- Conditions for employing a substitute
- Specific guidelines/procedures for operation of all services in the absence of the media and technology professional
- Routines for opening and closing the school day

VOLUNTEERS

- Training opportunities
- Scheduling for the convenience of volunteers
- Procedures and/or requirements that volunteers must follow when entering the school
- Types of tasks/activities

Professional Responsibilities

Many demands are made of educators that do not relate directly to their assignment, but are necessary for the smooth operation of the school. Media assistants and media and technology professionals should balance these activities with their specific job descriptions; however, it may be necessary to negotiate with the principal over responsibilities that may conflict with the requirements of the media and technology program. Some duties that require management by personnel include:

- Documenting personal performance to prepare for evaluation by administrators
- Serving on school and/or system-level committees
- Performing extra duties
- Participating in extra-curricular activities
- Attending professional growth activities and professional conferences

Resources

While management of the resources is primarily the function of the media and technology staff, involvement of the Media Advisory Committee, other staff, and students can encourage the use of the resources. Ideas for consideration in the management of resources include:

MAINTENANCE AND MANAGEMENT

- Systematic plan for collection development
- Weeding and selection by content area specialists
- Timeline for purchasing materials that require frequent updating
- Suggestion box for students and staff
- Active Media Advisory Committee
- Long-range plans for technology

PUBLICITY

- Bulletins, displays, bibliographies of new materials and equipment
- Demonstrations and preview sessions for new media and technology
- Exhibits for special occasions and/or events within the school and in the community

Scheduling

To offer a full spectrum of services, media and technolgoy programs should provide as much flexibility as possible in their schedules to allow continuous access to all resources for all users. Working with the Media Advisory Committee, the media and technology staff can plan a schedule that matches the needs of the school's instructional program. Systematic methods for scheduling all the resources—human, facilities, equipment, and media—can save time and energy for media and technology personnel as well as teachers. Some techniques for managing schedules include:

- Reservation forms and/or calendars for reserving resources—human, facilities, equipment, and media (See **Sample Media Center Schedule** and **Stough Elementary Media Center** in the Program section of the Appendix)
- Equipment stationed throughout the school for teachers to share

- Equipment assigned to individual teachers
- Procedures for allowing individuals and small groups to use the media center without advance reservations
- Methods for reserving specific areas of the media and technology facilities so that the space can accommodate more than one group

Student Assistants

While the student assistants' program is part of information skills instruction, there are management processes that surround the program. Consideration should be given to:

- Methods of selecting assistants (or procedures for applying to the program)
- Credit for high school students revolving around a structured course to be included in the school course offerings
- Orientation
- On-going training and instruction
- Assignment of tasks
- Methods of monitoring student progress and completion of assigned duties
- Methods of evaluation

On May 5, 1988, the State Board of Education approved a policy which defines a credit course in high schools. A Student Library Media Assistants' Program, for which there is a curriculum guide and evaluation of student learning, **is allowed** within the adopted policy. Refer to the **Personnel** chapter for typical duties of student assistants which may be incorporated into learning experiences.

ASSESSING YOUR PROGRAM

What is the status of this component of your media and technology program? By answering the following questions, you can begin to collect the information you need for the implementation of a local planning and assessment model. For further information about the process, refer to the Planning and Assessment chapter.

PROGRAM

1. **Do the media and technology professionals plan with classroom teachers in order to integrate information and computer skills instruction into curricular areas?**
2. **Are the media and technology professionals involved with curriculum planning teams?**
3. **Do the media and technology professionals attend departmental/grade-level meetings?**
4. **Are a variety of teaching techniques used by media and technology professionals?**
5. **Do the media and technology professionals use a variety of materials and encourage others to do the same?**
6. **Is literature appreciation part of the library media program?**
7. **Do the media coordinator and other designated media and technology professionals follow a sequential skills program as outlined by the *Standard Course of Study*?**
8. **Are students periodically evaluated to determine skills achievement?**
9. **Do schedules allow students to use the library media center at all times?**
10. **Does a process exist to seek input regarding media and technology programs from students and teachers in a variety of ways?**

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Planning and Assessment

INTRODUCTION

Increased demands for accountability form the basis for questioning the established ways of providing for learning. Although assessment is an important means of measuring effectiveness, it also provides the impetus for planning the services and functions necessary for media and technology programs to strengthen the overall program of the school. To cope with the climate of change related to school reform, a systematic means of program design and evaluation is needed. ***Planning and assessment are essential to school improvement because they provide the framework for translating the mission of the school into desired outcomes.***

Expected gains for students, teachers, administrators, and the school community from systematic planning and assessment include:

- clarity of the purpose of media and technology programs within the school
- deliberate programs covering a broad spectrum of services
- documentation of the return on investments in media and technology programs
- a vehicle for adapting to changes within the school and the curriculum
- a method for abandoning outmoded services and practices
- a method for identifying and adding new services
- media and technology programs that are an integral part of the development and implementation of teaching that facilitates learning
- media and technology programs that are customized and relevant to the needs of individual schools and special populations within the school community
- opportunities to practice skills necessary for participation in the information society

Planning and assessment are on-going processes that require some formal procedures for maximum effectiveness. Although the actual step-by-step procedures may vary, any planning model must include these basic components:

> *"Well-managed media programs do not just endure whatever comes their way; they prevail over circumstances because they are led by managers who understand the nature of shifting priorities and changing program focus."*
>
> Anderson, 1985, p. 61

- mission and goals
- information on current program, user demands, and resources
- specific objectives
- instructional resources to meet objectives
- implementation strategies
- procedure for evaluation of the program objectives
- revision process

Just as the quality of instruction is measured by student outcomes, the quality of the school library media program and other technology programs can be assessed by analyzing the effectiveness of their services and functions. The first step in implementing a program is to identify a team such as the Media Advisory Committee to oversee the process. Working together, members of this team establish clearly defined priorities that respond to the curriculum, the school mission, student demographics, and local issues within the school, school system, and the community (See **A Media Program Planning Model** in the Planning and Assessment section of the Appendix).

Although they may have varying levels of knowledge about systematic planning and assessment, media and technology professionals are obligated to begin to question and analyze practices and procedures. This process will enable professionals to become more proactive in meeting the needs of students and teachers through the media and technology programs. Support and understanding from all levels of administration for the planning and assessment process is essential if the programs are to be an integral part of the school. Cooperative planning with teachers, students, and the community increases the likelihood that these programs will be understood and that user needs will be met.

National guidelines, state-level recommendations, professional literature, and research studies are primary information sources for the planning and assessment team—defining current philosophy and effective practices for programs significantly impacting instruction within the school. Systematic planning and assessment are parts of a continuous process that translate the philosophy and practices into reality. A formal approach provides the structure to facilitate delivery of comprehensive media and technology programs that are responsive to individual school and user needs.

THE PLANNING AND ASSESSMENT TEAM

Planning and assessment procedures are most effective when those responsible for the program are involved in designing and implementing the *process* as well as the program. All those who interface with the media and technology programs provide different perspectives and information that combine to shape these programs into an indispensable instructional force within the school. While all these groups/individuals can be involved at different points in the process, the Media Advisory Committee originates and oversees all aspects of the planning and assessment process.

Administrators

- Establish an environment for planning and assessment
- Set high expectations at the building and system-level
- Participate in developing long-range plans
- Provide support for the media and technology programs

Teachers

- Contribute curricular objectives
- Provide information about learner needs
- Articulate staff development and resource needs

Media Coordinators and Other Media and Technology Professionals

- Contribute professional expectations of the media and technology program—mission and goals
- Provide leadership and follow-up for planning and assessment of the media and technology programs
- Implement the program objectives identified through the planning process
- Initiate the evaluation process
- Apply knowledge gained through professional development to expand program offerings

Students

- Communicate informational and recreational needs
- Provide program perspective from the user viewpoint

Parents and Community Representatives

- Help set expectations for the school
- Provide additional resources to support the curriculum

Other Contributors

ACCREDITATION AGENCIES

- Define standards
- Validate self-assessments
- Offer recommendations for further improvement

OUTSIDE CONSULTANTS

- Contribute a broader perspective on effective practices
- Offer fresh, unbiased opinions
- Make positive suggestions for further program development
- Identify exemplary programs to serve as models

OBJECTIVES OF PLANNING AND ASSESSMENT

Assessment is a means of measuring the effectiveness of the program and assisting with the planning process. Three major objectives can be accomplished through assessment procedures.

PROGRAM DESIGN

- **Program design** is accomplished through assessment techniques that examine the relationship between media and technology program services and user needs to focus the program on activities that are valued by the users. The Media Advisory Committee has the leadership responsibility for using assessment tools to create specific program objectives.

EFFECTIVENESS DOCUMENTATION

- **Effectiveness documentation** determines the degree to which the program objectives are accomplished and links the media and technology programs to the overall effectiveness of the school. It further justifies the budget for resources that support instruction. Future expansion of media and technology programs will depend upon how well evaluative procedures document the quantitative and qualitative aspects of these programs that impact student learning.

PERSONNEL EVALUATION

- **Personnel evaluation** is a responsibility of local school systems and is based on evaluation standards and criteria developed by state and local boards of education to comply with G. S. 115C-326 in *Public School Laws of North Carolina*. Periodic examination and revision of all assessment processes, job descriptions, and appraisal instruments is done to reflect the changing roles of personnel, as a key component of effective media and technology programs. The **Personnel** chapter provides a detailed discussion of personnel issues.

> ***"There seems to be virtue, however, in first determining what the range of available assessment options actually is, then framing one's objectives in such a way that those objectives are linked to available assessment instrumentation. To formulate educational objectives while remaining oblivious of assessment possibilities is folly."***
>
> Popham, 1988, p. 65

CATEGORIES OF ASSESSMENT

Using the two recognized categories of evaluation—formative and summative—at appropriate times can provide both quantitative (statistics) and qualitative (narrative descriptions) data necessary to continue an effective program.

FORMATIVE EVALUATION

- **Formative evaluations** are used during the process of designing and implementing the program. As parameters change, formative evaluations indicate the need to change course. Trial and error experimentation is also considered a formative evaluation. Surveys, self-assessment instruments, questionnaires, information sheets, or personal interviews are common diagnostic evaluations used in planning media and technology programs.

SUMMATIVE EVALUATION

- **Summative evaluations** show how well and to what extent the objectives were successfully met. Summative evaluations may be done at the completion of a program or at different mileposts within the implementation timeline. Examples are: the Media Coordinator Performance Appraisal Instrument (MCPAI) which is used annually to evaluate personnel, annual reports, end-of-course exams, and unit tests.

"Ultimately the value of program evaluation must be judged in terms of its actual and potential contributions to improving learning, teaching and administration, health care and health, and in general, the quality of life in our society."

Madaus, Scriven, & Stufflebeam, 1983, p. 18

METHODS OF ASSESSMENT

Various methods and procedures may be incorporated into a thorough, systematic evaluation process. Schools and school systems are encouraged to devise techniques, procedures, and instruments that can quantify and qualify the efficiency and effectiveness of individual programs. Several forms of assessment are listed below.

- **Performance appraisal instruments** are used to evaluate personnel.
- **Self-assessment instruments** are designed to allow individuals to measure themselves against commonly expected criteria.
- **Data collection forms and procedures**, either formal or informal, are expected to produce quantitative data. Some simple examples are: keeping track of circulation records, recording the number of reference questions asked during a set period of time, calculating the costs and number of on-line database searches, using a chart to record the number of times individual students visit the media center using a flexible schedule.
- **Written reports** such as annual plans and work summaries which can be narrative as well as statistical, provide documentation for many aspects of media and technology programs.
- **Formal research studies** provide the needed data for underscoring the value and contribution of media and technology programs to the overall instructional program. Additional research is needed in the field of library and information sciences; therefore, individual schools and school districts are encouraged to generate locally-designed research studies to add to the information base. These studies can be designed to produce statistics and/or provide a narrative description.
    - **Quantitative research** is the most common type of evaluation and relies on numerical data and/or statistics. Although its importance should not be minimized, "more" is not necessarily better. A media center can have an adequate staff, a large collection, and sufficient space in the facility, yet still not meet user needs. National, regional, state, and local standards have tended to be quantitative in the past; however, there is increasing attention to qualitative data.

National, regional, state and local standards have tended to be quantitative in the past; however, there is increasing attention to qualitative data.

- **Qualitative research** is a narrative description of the results of implementing a program or service. Since these measures tend to be subjective, the individual research components need to be clearly articulated. Replicating qualitative studies can be difficult because the paradigm may never exist again. Successful attempts to replicate a qualitative study can be achieved by observing strict adherence to all factors affecting a program, wholly describing the setting/environment, defining the purpose in terms of specificity, and comparing to the same parameters to substantiate the data. Examples are observation, surveys, focus group interviews, research studies and questionnaires.

- **Opinion surveys** usually target the affective aspects of the program to indicate attitudes or perceptions regarding media and technology programs.

- **Personal interviews or focus group interviews** may have open-ended questions and/or objective questions that can provide information that may be impossible to gather any other way. A method for transcribing the results of the interviews must be decided ahead of time.

- **Questionnaires and surveys** can be designed to collect almost any type of information. These are the primary tools for gathering information leading to the development of program objectives. In designing an effective questionnaire or survey, it is imperative to consider the audience, the desired results, and the methods of synthesizing and reporting the information once it is completed (See **Media Program Assessment Instrument** in the Planning and Assessment section of the Appendix).

- **Federal, regional, and/or state procedures** often provide opportunities for self-analysis and for gathering input from professionals outside the immediate school district. These types of evaluations should not be intimidating, but should be used to gain a new perspective that will give new directions for the program.

- **Field testing** (or piloting) is a method of trying an idea and working through the problems before it is widely implemented. Learning about the experiences of others can often save time and energy when similar ideas are implemented.

PLANNING

Program planning differs from instructional planning because it is the process that determines all the components, including instruction, that are to be included within the program. As outlined in the **Program** section, high-powered media and technology programs consist of many program activities and services. In order to ensure that all or most of these components are in place, specific objectives for each activity or service must be formulated and evaluated. Although there is no single method of planning, the use of a planning model is a systematic attempt to broaden the scope of the program and to accommodate change without disruption.

Organizing for Systematic Planning

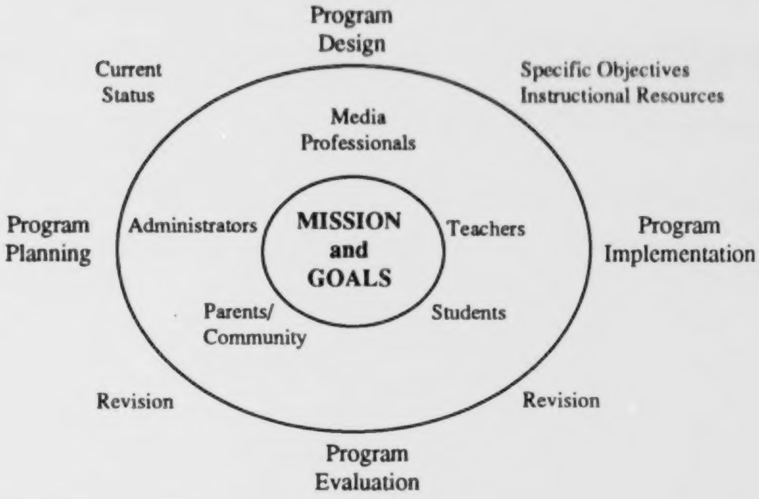
Before a plan can be developed and implemented, certain prerequisites must exist:

- **An environment** that allows and encourages risk-taking and is flexible enough to adapt to change without major disruptions
- **A committed Media Advisory Committee** with a common vocabulary and shared vision for the media and technology programs
- **Competent, confident media and technology professionals** capable of:
  - Practicing participatory management
  - Interacting successfully with adults as well as students
  - Articulating the mission, goals, and possibilities of the program
  - Gaining support from skeptics

A Model for Planning

Although there are many proposed models for program planning in professional literature, their characteristics are similar. Discussion with colleagues can be invaluable in working out a simple, yet suitable process when an activity is tried for the first time. The process can be revised at any time, but should not be totally abandoned if the program is expected to respond to the ever-changing educational scene. By using the following key elements, media and technology professionals are challenged to develop a step-by-step process for planning a diverse program that can be implemented successfully in the individual school.

A PLANNING MODEL


Program
Design
Current
Status
Specific Objectives
Instructional Resources
Media
Professionals
Program
Planning
Administrators
MISSION
and
GOALS
Teachers
Program
Implementation
Parents/
Community
Students
Revision
Revision
Program
Evaluation

MISSION AND GOALS

Planning begins with a statement of the mission of the program which supports the overall mission of the individual school and school system. More specific goals give parameters for activities that will contribute to the mission. The **Program** chapter outlines the mission of an effective program and seven supporting goals that are identified in the professional literature. Although the mission and goals may be adopted or customized by the school/ school district, the school media coordinator and other media and technology personnel must use professional knowledge to direct the local planning team as it determines the mission and goals that are appropriate and acceptable to their program.

CURRENT STATUS

Next in the planning process is an assessment of the current situation. The planning team may use personal knowledge and/or observation as well as formal assessment procedures to gain preliminary information that will be converted into specific objectives. A determination of a program's current status may include an assessment of:

- Curriculum and curricular needs
- Resource needs, including format preferences
- Types of classroom assignments
- Teacher methods, styles, and strategies
- Types of instructional unit evaluations used by teachers
- Developmental and social characteristics of learners

- Personal interests of students and teachers
- People available to support the program—teachers, counselors, administrators, other media professionals and parents
- Staff development needs including professional materials
- Program expectations defined in professional literature

SPECIFIC OBJECTIVES

While direct instruction by the media coordinator is important, it is not the only facet of the program. In order to provide a balanced, comprehensive program, specific objectives that encompass the entire spectrum of possible services and activities are needed. In examining the program's current status, media and technology professionals need to survey students and staff in appropriate ways to learn their preferences and needs in the areas described in detail in the **Program** section and summarized here. In identifying objectives, it is wise to set reasonable expectations. Try to determine preferences for the following:

- Curriculum Involvement - any number of activities that involve the media coordinator in curriculum design or instructional design

- Information Access - any number of activities that promote physical and intellectual access to resources

- Information Skills and Computer Skills Instruction - direct teaching and other activities associated with the skills required for seeking information in various formats and technologies; media and technology professionals are responsible for the total instructional design model

- Media Production - activities involving the creation of print and nonprint materials

- Personal, Social, Vocational Guidance - activities and services that highlight the use of media resources for objectives not related specifically to classroom instruction

- Reading, Listening, Viewing Guidance - activities that assist students and teachers in finding resources for specific needs, in understanding the effects or attributes of a particular medium, in learning about the use of a particular medium to achieve unstated objectives (analyzing the effects of various media on individuals)

- Reference Services - activities and services that assist students and teachers in finding specific information
- Staff Development Delivery - workshops, individual guidance, and/or presentations that contribute to the professional growth of colleagues
- Technology Services - any number of activities that relate to the use of all kinds of hardware

INSTRUCTIONAL RESOURCES

Identification of the objectives will indicate the resources necessary to meet the objectives. For example, an objective relating to media production may indicate the need to purchase hardware and expendable supplies for various projects. In this activity, the implications for budget and collection development become apparent. Consequently, use of a systematic process for planning creates little room for doubt as to the justification for budget and resources.

IMPLEMENTATION STRATEGIES

Details of the implementation of each objective may be clarified by the teachers receiving the services and media and technology staff. A general timeline should be agreed upon so that all requests for services will not be scheduled at the same time.

EVALUATION

Summative evaluation is needed to determine the value of the program and the value of the planning process.

- **Evaluation of program** appraises all aspects of the media and technology programs to compile an accurate picture of the quality, scope, and variety of program components within the individual school and school system. The overall effectiveness of the program can be determined by examining the following integral pieces:
  - Partnerships
  - Media Advisory Committee
  - Program activities and services and their specific objectives
  - Program management functions
    - Personnel
    - Resources
    - Budget

  - Facilities
  - System-level

- **Evaluation of the planning process** determines the value of the planning process, whether or not it should be continued, and how it should be revised. Evaluation of the process should give feedback about the following:

  - Support for the program of services
  - Methods of collecting information (interviews, questionnaires, surveys)
  - Methods of analyzing data
  - Use of the information collected
  - Willingness of people to be involved in collecting and analyzing data
  - Willingness of people to be involved in the planning process again
  - Ideas for revising the process

REVISION

Because planning and assessment is an on-going process, activities can be revised at any time. However, analysis of all assessment devices should indicate the *areas* of the program and the planning process that require revision to meet the changing environment.

ASSESSING YOUR PROGRAM

What is the status of this component of your media and technology program? By answering the following questions, you can begin to collect the information you need for the implementation of a local planning and assessment model.

PLANNING AND ASSESSMENT

1. **Does your school/system have an on-going, systematic process for program design and evaluation?**
2. **Does the planning model used by your school/system represent a team effort, involving system-level media and technology professionals, administrators, students, staff, and community representatives?**
3. **Are a variety of assessment methods used to evaluate all aspects of existing programs?**
4. **Do substantive changes in program design result from the on-going assessment?**

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Resources

INTRODUCTION

Resources have always been the cornerstone of an effective school library media program. Once the province of The Book with an occasional 16mm film or silent filmstrip to supplement its print format, a school library media collection today incorporates myriad formats, reaching beyond the mere four walls of the center or its school building to encompass local, state, national, and even international resources.

Still resting firmly upon its original book format, a school library media collection currently chooses from a multitude of options to expand and enhance its information base. A middle school student may research a topic by using a magazine index in hard copy, in microfiche, or through an online search; a teacher may gather teaching strategies and materials through books, an electronic bulletin board, or FAX correspondence with a colleague or university professor; an elementary child can compare the encyclopedia entries found in hard copy, on CD-ROM, and from an online vendor; an honors high school student can access information from network teleconferences, university collections, international databases, and computer simulation programs. All these options, and many more, are open to a person using a school library media collection.

The changing nature and expansion of collections make the use of quantitative standards obsolete. Today, selecting resources that meet the unique needs of the individual school and community must be based on an analysis of many factors. The resources collection should contain new formats and delivery systems; however, traditional materials and locally produced items must also be represented. (See **Points to Consider in Evaluating Media** in the Resources section of the Appendix.)

Unfortunately, as the resource options have increased, so has the expense of these materials. And in these days of budget deficits and rampant inflation, most media budgets have not kept pace. Consequently, the school media coordinator is faced with a series of difficult choices: how to provide access to all the modern information available within the constraints of a tradition-oriented media budget.

> *"The library media center's resources and equipment serve as the primary information base and the tools through which library media specialists make ideas and information available to students and teachers. . . The term collection has traditionally signified the information base contained within the school. Today, the collection embraces not only the library media center's instructional materials—print and nonprint—but also equipment necessary to manage, produce, and use them."*
>
> Information Power, 1988, p. 69

Information choice is the essence of collection development and management in today's school library media program.

What has the potential to be a Catch-22 of "robbing Peter to pay Paul," however, actually can become an exciting challenge to provide the best information in the most appropriate format for the most individuals at the lowest price. With the help of a Media Advisory Committee, charged with keeping in mind the best interests of the entire school and its program, the media coordinator can plan a budget that incorporates careful trade-offs as materials, equipment, and services are purchased. What begins as a seeming exercise in futility can become an exciting opportunity for collection development in the truest sense of the word.

As this expanded, more complex collection is developed, however, many of the traditional concerns of access and equity take on broader, more serious implications. Information is gradually becoming the difference between society's "have's" and "have not's" whether they are schools, businesses, or individuals. How school library media programs deal with the issues of access to information today with their students may determine the way in which society deals with this thorny issue in the future.

Every school should have an equal opportunity to access the information needed to support its curriculum and over-all program as well as the developmental needs and interests of its students. Obviously, this equal opportunity is predicated upon a minimum level of funding which enables this information access to take place. Likewise, each school should have the freedom to provide this access in the ways it decides are best for its particular program, school population, and community.

As a corollary, each student and staff member should have equal access to information. Thus, if fees are to be charged for services such as online searching and photocopying, comparable information and the time to retrieve it should be available to those individuals who do not choose to spend their money in this fashion.

This information choice is the essence of collection development and management in today's school library media program. This chapter will focus on the strategies and practices for making the best information choices for individual schools and their curricula, students, and staff through:

- Needs and collection assessments
- Collection development through resource selection
- Collection management through the organization and circulation of materials.

Developing a collection to meet the needs of a school's students and faculty is a never-ending process, cyclical in nature, and involves four basic processes:

- Analysis of needs
- Assessment of collection
- Selection of resources
- Acquisition of resources

The school media coordinator, with the help of the Media Advisory Committee, is constantly assessing needs; examining the collection; weeding old, inaccurate, out-of-date, and unattractive materials; and replacing them with new, more appropriate materials and formats. An effective, dynamic collection requires complete and perpetual inventory and evaluation. Assessing faculty and student needs without carefully determining how the collection is meeting those needs gives a media coordinator only half the information necessary for acquiring resources. Adding new resources and formats without discarding older, less appropriate ones creates an overwhelming mishmash of materials that is difficult to use and impossible to discern.

> *"The single reason for building a library media collection in the school is to support the curriculum of that school."*
>
> Loertscher & Ho, 1986, p. 7

Needs Assessment/Collection Analysis

The actual assessment process is logical, although time-consuming. It is, however, a process that can involve the Media Advisory Committee as much or as little as is appropriate. The individual school's curriculum, community standards, and faculty and student needs and interests must be analyzed, and then the resource requirements which correspond with this evaluation must be determined. Once the needs assessment is completed, a plan for collection development can be put into place.

There are many needs/collection analysis methods available, some more effective than others, some more difficult and time-consuming than others. All offer **concrete** ways to prove whether or not a collection is meeting the needs of the people who use it.

- **COLLECTION MAPPING:** A process by which collections are analyzed according to numbers of materials which meet specific curricular needs per student. (*Premise:* Number of materials in particular curricular areas per user indicates collection effectiveness.)

- **AVERAGE AGE OF THE COLLECTION:** A simple formula which allows the computation of the average copyright date of materials to give an idea of how old a collection is. (*Premise:* An older collection does not meet needs of clientele as effectively as a more up-to-date collection.)

- **USE STATISTICS:** By using circulation statistics (or reference contacts), the media coordinator can determine how well certain areas of the collection are meeting the needs of faculty and students by their rate of use. (*Premise:* Students and faculty use only the materials that adequately meet their needs.)

- **OPINION SURVEYS:** By interviewing students and/or faculty either verbally or through written instruments, media coordinator can determine whether or not the collection is meeting their needs . (*Premise:* Users will be honest and aware of what they need.)

Selection

Selection of resources, like collection analysis, is an ongoing process. With the introduction of new and varied formats and technology, the selection process is more complicated and stressful. One can no longer simply rely on a glowing review of a book or video in making selections. Likewise, choosing the least expensive format may not be the most effective use of limited funds. The media coordinator and/or the Media Advisory Committee must determine how information can be most effectively accessed. All these selection decisions can be made only at individual schools with careful analysis and discussion within the Media Advisory Committee. While there are no right or wrong answers, there are several universal criteria to consider:

- Is this the best format for presentation of this information?
- Can this technology/format be used by many students of varying ability levels at approximately the same time? (Is this criterion necessary for this particular resource?)
- Can the school provide ongoing support for this format? (e.g., telecommunications charges)
- Does this format take into consideration the school's goals and objectives for its students/teachers?

Selection of resources is based on a sound, system-level, written policy as called for in: ***PUBLIC SCHOOL LAWS OF NORTH CAROLINA,*** *General Statute 115C-98 (b) and (c).*

- Is this the best use of limited resources? (See **Media Costs** in the Resources section of the Appendix.)
- Do the items selected require adherence to the Division of State Purchase and Contract guidelines? (See **State Contract Purchasing Procedures** in the Resources section of the Appendix.)

Once these questions are addressed and decisions made, items can be selected and acquired, keeping a variety of specific selection criteria in mind (See **Selection Aids** in the Resources section of

The inventory of the school's entire media holdings, both instructional materials and equipment, should be coordinated through the school's media center, regardless of location.

The Building-Level Professional Collection

A professional collection should be provided to encourage teachers to keep abreast of current education initiatives and to apprise them of experimentation in all fields of education. In addition, access to professional literature and technology formats can support the informed selection of appropriate materials and equipment for the school's instructional program. Management of the professional collection by a media coordinator who is both active and proactive can provide guidance to teachers in both the theory and application of effective practices (See **The Professional Collection** in the System-Level section of the Appendix for suggested resources and use of the collection).

Collection Management

ORGANIZATION

All school-owned materials need to be organized and arranged so that users can obtain any item quickly and easily. This organization includes classifying, cataloging, and providing entries for all materials in a unified catalog. Cataloging is a labor-intensive function that is particularly suited to computerization. The development of a standardized machine readable bibliographic format (MARC record) for cataloging materials, as well as technological advances in both individual and network computer systems, has revolutionized cataloging services in school library media centers.

The catalog itself may be in either a traditional print format or an automated online catalog. One advantage of the online catalog over a card catalog is easier access to wider ranges of subject

CIRCULATION

headings and cross-references, which results generally in more successful patron searches. In addition, the online catalog increases access speed for the user and facilitates updates to the catalog. These "user-friendly" advantages encourage increased use of media services and resources.

Circulation and loan policies must encourage users to borrow materials and equipment for use throughout the school, at home, and in the media center. For example, access to materials should not be denied to students who cannot afford photocopying fees. Review circulation policies periodically to ensure that all students have equal access to information and that no obstacles inhibit the use of media resources.

Microcomputers are being used successfully in many school media centers today to manage circulation, to report overdues, to generate circulation statistics, and to facilitate inventory. In addition, these automated systems can provide additional security for circulation of materials and equipment. By using technology to perform these labor-intensive functions, the media coordinator can save considerable time that can then be used for working with students and teachers.

MAINTENANCE

Regular maintenance of the collection includes on-going inventory, weeding, and preventive maintenance and repair. Collection development plans and budget proposals should include provisions for these maintenance functions. (See **Maintaining the Collection-Inventory** and **Weeding the Media Collection** in the Resources section of the Appendix.)

ACCESSIBILITY

All resources in the school should be readily accessible to every user. Accessibility involves:

- adequacy of physical facilities
- provision, organization, location, and arrangement of the resources
- policies and procedures regulating the circulation of resources
- flexible scheduling to accommodate students, teachers, the media and technology staff

Media and technology staff and patrons must be aware of and comply with copyright regulations affecting the availability of materials. (See **Copyright Issues for Educators** and **Duplication of Copyrighted Materials** in the Resources section of the Appendix.)

MATERIALS

The variety of activities and personal interests found in a school places great demands on the school library media collection. Technological advancements coupled with these demands have created dramatic changes in the character and composition of the library media center collection. Recently, collections once dominated by books have been extended by large collections of computer software, videotapes, CD-ROM, and dozens of other kinds of resources.

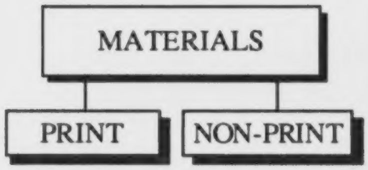
The description of a library media collection traditionally focused on the collection housed in the school. The contemporary description of the school's library media collection encompasses materials organized and housed for retrieval in the schools PLUS information that is located outside the school—in other libraries, in electronic databases, in museums, or in other information agencies. Today's media coordinator is more an information access manager than a keeper of the collection.

Media coordinators need the flexibility to change the way media programs provide services to students and faculty in support of the instructional program; therefore, **the need for quantitative standards for collections is no longer valid**. In moving toward resource-based schools, the types and sizes of collections depend on services provided by the media program, the curriculum, the instructional program, and on teaching strategies. Appendix A in *Information Power* provides guidelines for quantitative criteria based on the relationship between services provided and size of collection. However, *Information Power* (AASL/AECT, 1988, p. 115) authors warn:

> *Quantitative descriptions are limited in value because the quantitative characteristics of programs vary in relation to needs and program activities.*

A **qualitative** approach to collection development, administered thoughtfully by the school's Media Advisory Committee and interpreted carefully to school administrators, will promote the development and maintenance of a modern and usable collection.

[For schools that have chosen to become members of the Southern Association of Colleges and Schools (SACS), see **Regional Resources Standards** in the Resources section of the Appendix.]



The charts in this section are intended to show the diversity of materials that are now available for school media collections. They have been divided into print and non-print and include both traditional and advanced technologies. In order to build a balanced collection, choices will need to be made from both categories and reflect the following:

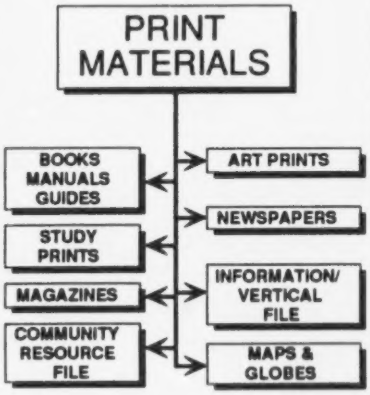
- Curricular needs of the school
- Interests of the students
- Learning styles of the students
- Ability levels of the students
- Needs of the community
- Professional needs of the teachers

The single reason for building a library media collection in the schools is to support the curriculum of that school. . .School-based collections are very different from public library collection. . .Public library collections are more diverse. School library collections are focused. . .The trend for excellence in education now demands that a more focused approach be attempted. Money spent on library media collections should have a payoff in terms of curricular benefit. If a teacher or student does not have the materials needed to learn, a quality education is in danger. . .Library collections are "living" entities. This means that they need constant care and feeding if they are to provide what students and teachers need. . .The tragedy of mediocre library media collections is as great as any major accident which could have been prevented.

Loertscher & Ho, 1986, p. 7

PRINT MATERIALS

BOOKS, MANUALS, GUIDES



Both hardback and paperback books can be useful in a school media center. Hardbacks are more durable and are good choices for titles which will require many circulations or titles which will be expected to be in use for several years. Paperbacks are a more inexpensive way to provide multiple copies when there is an instructional need or a popular demand. Often they are more appealing to students and can be used to motivate the reluctant reader. Because of their price, they can be used to fill a short-lived need. Selection of both hardback an paperback books should be based on content and format as well as physical considerations (bindings, quality of paper, typeface, quality of illustrations).

Besides printed materials for instructional, professional or leisure uses, there are also many manuals and guides for equipment and special resources that must be properly stored for easy retrieval. If possible, these manuals or guides should be stored with the item. If this is not possible, a separate file should be maintained for this purpose.

ART PRINTS

Reproduced works of art in sizes 8" x 10" or larger should be faithful to the original in terms of color and detail. Various artists, subjects, countries, historical periods, and art movements should be represented. It is highly desirable that framed art be available for home circulation and/or for school display.

STUDY PRINTS

Photographs or drawings of people, places, and things, with accompanying information on one side or in a supplemental guide book, are used by students for study purposes. They should be of durable materials and protected by a laminate or transparent covering.

NEWSPAPERS

Newspapers providing local, state, and national coverage should be included in the collection. At least one should be a daily newspaper with national and international coverage.

MAGAZINES

Magazines should represent the interests and instructional needs of students or be a source of professional information for teachers. They are most useful for the currency of their information and the motivational appeal they hold for students. Indices such as *Children's Magazine Guide* (K-8) and *Abridged Readers' Guide to Periodical Literature* (middle and high school) should be available.

INFORMATION/ VERTICAL FILE

An organized file of pamphlets, pictures, clippings, and other appropriate ephemeral materials should be developed with the needs of students, staff, and curriculum in mind. Such criteria as the extent and advertising message on the pamphlet must be a prime consideration. This collection must be reviewed often for currency of information. Much of this material is free or inexpensive. All items should be labeled with the appropriate subject heading and stamped with an identifying marker.

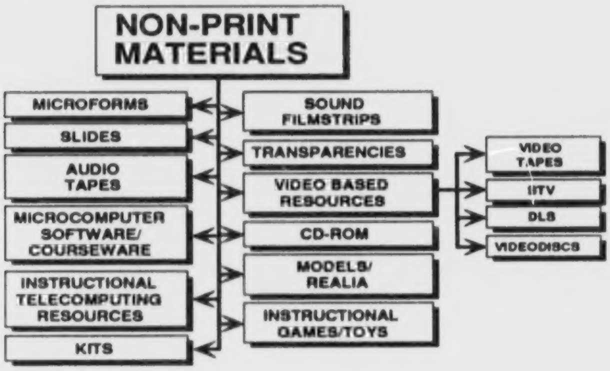
COMMUNITY RESOURCE FILE

A collection, containing information about persons, places, services, and other community resources available to schools, may be kept as an independent file, a drawer in the card catalog or interfiled with other catalog cards. The information should be updated annually.

MAPS & GLOBES

Topographic maps of geographic areas should be available, as well as those showing political boundaries and place names. Historical maps of the earth are essential for a study of history. Maps can be in atlases, flat for table or floor study, or wall maps for large group study. Outline maps may encourage students to learn names and boundaries by shapes and locations. Colored maps are preferred. The color should help interpret the information and the symbols should be easily read. School maps should be updated frequently to show changes in political boundaries (See **Maps and Globes** in the Resources section of the Appendix).

NON-PRINT MATERIALS


NON-PRINT MATERIALS
MICROFORMS
SLIDES
AUDIO TAPES
MICROCOMPUTER SOFTWARE/ COURSEWARE
INSTRUCTIONAL TELECOMPUTING RESOURCES
KITS
SOUND FILMSTRIPS
TRANSPARENCIES
VIDEO BASED RESOURCES
CD-ROM
MODELS/ REALIA
INSTRUCTIONAL GAMES/TOYS
VIDEO TAPES
IITV
DLS
VIDEODISCS

MICROFORMS

The most common microform found in school libraries is *microfiche* and usually contains copies of newspapers and magazines. Although a smaller amount of storage space is required for this format, it can be less appealing to some students and does require relatively expensive viewing/printing equipment. In media centers where students do extensive research, microfiche is more economical and efficient than paper copies.

SOUND FILMSTRIPS

Sound filmstrips are popular with teachers because they can be used effectively with individuals, small or large groups and in a fully lighted room. Since this format is small, it is easy to store or shelve with books.

SLIDES

Although slides may be shown individually, they are usually arranged and used in carousel or other projection trays. Synchronized audio recordings may be added. Presentation sequences can be changed easily to fit different instructional needs.

TRANSPARENCIES

The transparency presents information through text or graphics and can be used in lighted rooms with users facing their audience. Additional details can be added with marking pens during instruction. It is important to use large text when producing transparencies locally. Storage should be in an upright position, e.g., in a file cabinet.

AUDIO TAPES

Most audio tapes in a school media center are enclosed in a cassette which can be easily placed in a player. The length of playing time can be from 10 to 120 minutes. Tapes are used for listening or for recording. They may be erased and used many times without noticeable changes in quality. Magnetic tape is sensitive to heat.

VIDEO BASED RESOURCES

Videotapes-The most common format is 1/2" VHS. These can be commercially produced and recorded or locally produced using a video camera. The content ranges from dramas to actual occurrences and covers all content areas. Videotapes can be replayed instantly for evaluation and analysis or can be stopped and replayed for clarification or reinforcement. Standard monitors limit the viewing group size. For a large viewing audience, multiple monitors or special projection equipment is needed.

STV-The School Television Program offers numerous and varied instructional television series and specials for use by teachers and administrators in the public schools (pre K-12) of North Carolina. The programs complement curricular goals as outlined in the *North Carolina Standard Course of Study*. Staff Development series which offer instruction to teachers are included in the spectrum of programming.

Instructional programming is broadcast over the North Carolina Public Television network. Schools have off-air recording and use rights. School Television Catalog notes more specific information on each series. Some non-broadcast programs are available from the Department of Public Instruction on a free loan basis.

DLS-The Distance Learning by Satellite Network offers satellite delivered instruction to at least one location in every county of North Carolina. A location is designated either as a high school instructional site and/or a staff development site. Staff development sites were identified by the superintendent(s) of a given county. High school sites meet the criteria of the 1987 legislation establishing the program and offer a commitment to support locally the classes offered by satellite.

North Carolina sites vary in administration of the local satellite services. It is strongly recommended that the programming be used live and interactively, but local needs and circumstances vary. Many of the staff development and student enrichment programs can be videotaped and used to expand the local professional library or enhance the circulating audiovisual collection. (See **Program and Course Guide,** sent to schools annually by the Division of Media and Technology Services, for use rights.)

Be aware that any new satellite installation must be preceded by a site survey to determine the best location for a TVRO (television receive only) installation.

Videodiscs- Videodiscs are metal discs usually 12" in diameter on which audio, still pictures, and full motion video are stored onto the surface of the videodisc using lasers to encode information. Visuals and sound are retrieved by using a low-powered laser in a videodisc player to scan the disc and are displayed on a television monitor/receiver.

MICROCOMPUTER SOFTWARE/ COURSEWARE

Microcomputer software consists of instructions and information to be loaded into a computer, usually from a diskette, tape, or cartridge. The term "software" refers to the actual instructions/ information while the phrase "microcomputer courseware" is used for the total package of materials including the software, printed manual, and educational materials.

CD-ROM

CD-ROMs are 4 3/4" plastic discs that hold computer data such as text files, graphics, audio, and video. Information is retrieved using a CD-ROM drive containing a low-power laser to read the disc. The CD-ROM drive is either an external peripheral for or an internal component of a computer system. CD-ROMs must be used with a computer and this special disk drive.

INSTRUCTIONAL TELECOMPUTING RESOURCES

Resources obtained, usually for a fee, using a computer to access information from another computer through the use of telephone lines and a modem. These resources are available from a variety of organizations which can be categorized into four service groups:

- *Information services databases* may include encyclopedias; indexes to journals and newspapers; personal services such as airline schedules, news and weather, stock prices; and reviews of books, movies, and stage productions.

- *Electronic mail exchanges* distribute private messages between individuals who subscribe to the same service. This service is often referred to as E-mail.

- *Electronic bulletin boards* may include electronic mail but usually refer to public forums where users may post computer programs and/or post and respond to public messages.

- *Curriculum support services* offer organized curriculum materials and activities designed to teach specific objectives. Students may exchange information for collaboration, or information may be collected by students and sent to one location for interpretation or compilation (e.g., FrEdMail and National Geographic KidsNet).

MODELS/REALIA

A *model* is a three-dimensional representation of an object reproduced in the size of the original or to scale, such as a globe. Realia are real objects such as coins or rocks. They also may be living or preserved specimens, such as fossils.

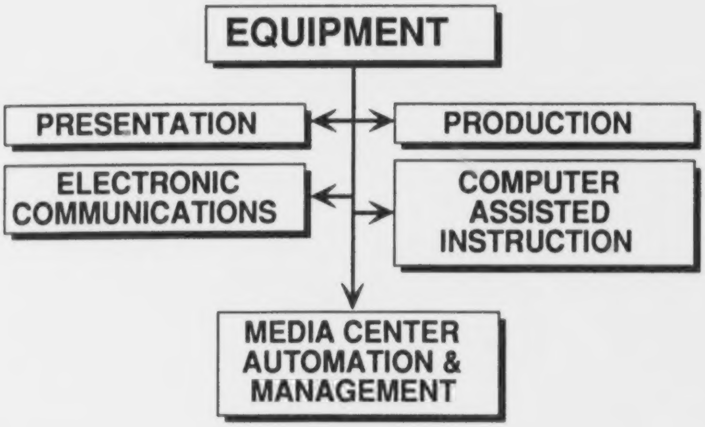
KITS

A kit is a collection of at least three different types of media designed to be used as a unit. All items should be related in some manner and present a unified topic. Each part in a kit should be evaluated according to criteria for that format. Often, kits can be created from existing materials when the need arises rather than purchasing them from commercial sources. Consideration must be given to storage space for large kits.

INSTRUCTIONAL GAMES/TOYS

Often overlooked as teaching devices, games can motivate students to learn. Toys are useful in teaching motor skills and affective skills in storytelling. Affix directions to game/toy containers or in a special file. Materials should be safe for intended ages. Toys may present storage problems.

EQUIPMENT

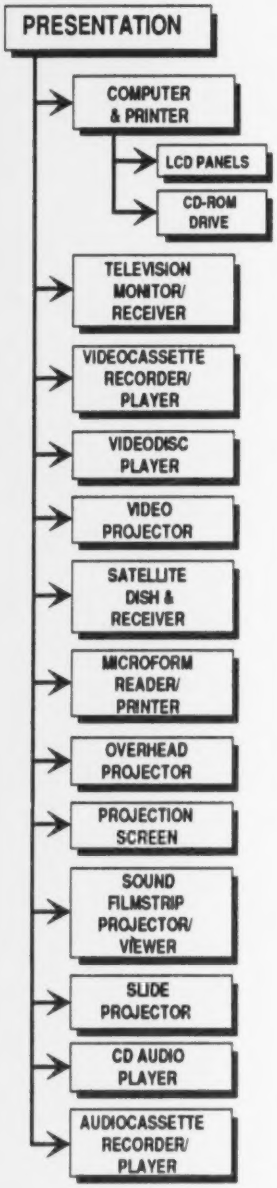

EQUIPMENT
PRESENTATION
PRODUCTION
ELECTRONIC COMMUNICATIONS
COMPUTER ASSISTED INSTRUCTION
MEDIA CENTER AUTOMATION & MANAGEMENT

The school library media center's equipment are the tools used to make ideas and information available to students and teachers. This equipment is necessary to meet the needs of individual students and support the curriculum. The diversity of instructional programs in individual schools and school systems makes suggesting specific types and quantities of equipment per student no longer necessary. The equipment addressed in this section is needed to manage, produce, and use instructional materials purchased or created by students and teachers.

Constant changes in technology require that educators be aware of new types of instructional materials and new educational strategies or techniques. School library media personnel must acknowledge these changes by acquiring and using new types of media and associated equipment.

Materials in many different formats can be used only with appropriate equipment. Compatible equipment in sufficient quantities is required for effective use of materials. Within this section, specific pieces of equipment may be mentioned several times. This repetition does not mean separate pieces of equipment must be purchased for each use listed. A single piece of equipment can be used to fulfill more than one function. The following equipment is grouped into specific categories of use:

PRESENTATION:
Equipment necessary to access audiovisual materials for classroom or individual use.


PRESENTATION
COMPUTER & PRINTER
LCD PANELS
CD-ROM DRIVE
TELEVISION MONITOR/ RECEIVER
VIDEOCASSETTE RECORDER/ PLAYER
VIDEODISC PLAYER
VIDEO PROJECTOR
SATELLITE DISH & RECEIVER
MICROFORM READER/ PRINTER
OVERHEAD PROJECTOR
PROJECTION SCREEN
SOUND FILMSTRIP PROJECTOR/ VIEWER
SLIDE PROJECTOR
CD AUDIO PLAYER
AUDIOCASSETTE RECORDER/ PLAYER

Computer & Printer-With the introduction of graphic design/ presentation software and instructional courseware, microcomputers are used today as information delivery tools to supplement classroom instruction. The professional appearance and flexibility of computer presentations make them ideal tools for teachers to deliver instruction to single users as well as large groups.

- Teachers can enrich classroom instruction by using instructional software shown on a large-screen monitor/ receiver or LCD panel.
- Students can create multimedia presentations using a computer with other technologies and present them to a class as an alternative to written reports.

LCD Panel-Uses liquid crystal display technology to project computer images for large group viewing. The computer generated image is transmitted to an LCD panel placed on an overhead projector. The light from the overhead passes through the LCD Panel projecting the image onto a projection screen.

- The least expensive LCD panels project computer images only in black and white.
- More expensive systems will display gray scales, colorized images, or true color.
- Some systems can store computer images in memory, either on diskette or on RAM chips within the panel.
- Some systems allow users to view images on the computer monitor and the LCD panel simultaneously.

NOTE: The extended use of an LCD panel on an older model overhead projector may not allow sufficient airflow and, thus, cause overheating of the panel that results in fading of the projected image.

CD-ROM Drive-A computer peripheral that permits access to Compact Disc - Read Only Memory (a mass storage medium for computer data, pictures, and sound)

- This drive allows users to access information including text, computer-generated graphics, still pictures, and half-motion video that has been stored on a CD-ROM disc.
- Common CD-ROM applications are databases, ency clopedias, and indexes.

Television Monitor/Receiver-A display device capable of receiving broadcast video signals by means of an antenna or composite video signals by means of direct line input. A monitor/ receiver can be used in combination with a radio-frequency modulator as a display device for a microcomputer.

- A television *receiver* displays on-air broadcasts or RF frequency video (e.g., UHF and VHF transmissions).
- A video *monitor* displays composite video signals from sources such as video cameras.

Videocassette Recorder/Player-Uses an electromagnetic process to record video images and sound onto magnetic tape. A videocassette player lacks the ability to record but can play prerecorded videocassettes.

- The most common format is 1/2" VHS.
- Most videocassette recorders can play video through a television receiver using a radio frequency signal. Some videocassette recorders send out a composite video signal that requires a television monitor for viewing.

Videodisc Player-A device required to access videodiscs (metal discs resembling a phonograph record). A videodisc player uses a low-intensity laser beam to retrieve sound, still pictures, and full motion video for display on a television monitor/receiver. Some videodisc players can be controlled by a computer.

- Videodisc players are capable of accessing thousands of still images, sounds, and full-motion video from a single videodisc.
- Videodiscs players have an advantage over videocassette recorder/players in that any image (in some cases a specific frame) on the videodisc can be accessed in seconds.
- Teachers can display specific images or motion sequences by using a remote control or specially prepared bar code labels.

Video Projector-A display device that projects video images from equipment such as a videocassette recorder/player or videodisc player onto a projection screen.

- Some video projectors require a separate audio amplifier and speaker.

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- Most video projectors can be used only in very dark rooms.

Satellite Dish & Receiver-Allows direct reception of satellite broadcasts. A satellite receiving station consists of a large metal dish/reflector. The dish reflects satellite signals into a precision collector called a feedhorn. The feedhorn directs the signals into the LBN (low noise blocker). A satellite receiver interprets satellite signals into video and audio for display on a television monitor.

- Satellite dish and receiver systems are used primarily to deliver direct, interactive instruction to students and staff development to teachers.
- Satellite receiving stations are referred to as earth stations, TVRO (Television Receive Only), and downlinks.
- Most satellite broadcasts occur in two bands: C and Ku.
- Fixed dishes can be stationary, always pointing at the same satellite, unless re-aimed by hand. Steerable dishes use motors to rotate the dish to receive signals from many satellites.

Microform Reader/Printer-A magnification/projection device used to view and/or print information stored on microfilm and microfiche.

Overhead Projector-An overhead projector, using a strong light source and a series of optical lenses, that sends light through transparent acetate enlarging and projecting images on the acetate onto a screen or other surface.

- The main advantage of this projector is that it may be used at the front of the class with the operator facing the audience.
- Due to the use of a strong light source and the relatively short distance to the screen, an overhead projector can be used in a well lighted room.

Projection Screen-Fabric or plastic-backed surface coated with special reflective material, used to display the output of projection equipment.

- Portable screens should be a minimum of 60" by 60" and are tripod mounted. Portable screens role onto compact tubes for protection during transport and storage.

- Wall mounted screens or ceiling mounted screens should be a minimum of 70" x 70" and are permanently placed (wall mounted screens may be rigid and made of metal or plastic with a reflective coating).

Sound Filmstrip Projector/Viewer-Audiovisual equipment designed to display still pictures supplemented by a synchronized sound track. The sound track is stored on a separate audiocassette or phonograph record. Sound filmstrip projectors allow large groups to view sound filmstrips. Sound filmstrip viewers do not require a darkened room for viewing the filmstrip and thereby allow small groups of individuals to view filmstrips in a study carrel or activity center.

- Filmstrip projectors are generally readily available, portable, and simple to operate.

Slide Projector-A carousel-type slide projector that displays still pictures, usually in the standard 35mm (2" x 2") slide format.

- An advantage to using slides and slide projectors is the freedom teachers have to change slides manually (either at the projector or with a remote control) or to use a timer to automatically change slides. These features give the user the ability to move about the class or point to items on the screen itself.
- A pre-programmed series of slides can be accompanied by an audio tape.

CD Audio Player-Uses a laser to read digitally recorded audio from a 4.75" plastic or glass disc. These players can allow random access to audio on a disc and they reproduce very high quality sound.

- CD players can be used with headphones or with amplified speakers for large group use.
- Since CD players use a light beam from a low power laser to read the disc, the discs are not subject to wear and should last indefinitely.

Audiocassette Recorder/Player-Recorders can record and/or play back sound. Players lack the ability to record but can play previously recorded audiocassettes.

Other types of presentation equipment commonly found in schools include, but are not limited to, the following:

- Audioslide Projector
- Audiotape Duplicator
- Earphones
- Listening Center/Jackbox
- Radio, AM and/or FM
- Record Player
- Public Address System (portable)
- Filmstrip Projector, Silent
- Motion Picture Projector, 16mm
- Opaque Projector

Audio Recorder-Audio reproduction devices used to record voices, music, and sound effects for student productions or teacher presentations.

- Some audio recorders are equipped with a synchronization feature that allows users to record an inaudible pulse that triggers the advance mechanism of a slide projector. This type of audio recorder allows users to create a slide presentation with a synchronized sound track.
- More sophisticated audio recorders allow users to mix several sound sources into a single sound track.

CD Audio Player-Uses a laser to read digitally recorded audio from a 4.75" plastic or glass disc. These players can allow random access to audio on a disc and reproduce very high quality sound.

- In student productions or teacher presentations, CD audio players can be used to supply supporting audio.

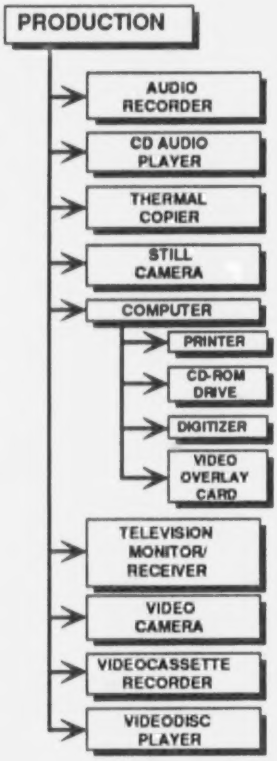
Thermal Copier-Often known as a "Thermofax," allows users to transfer text and graphics from a plain sheet of paper onto clear or colored acetate using a heat transfer process.

- Thermal transparencies can be cut into smaller pieces and put into 2" by 2" slide mounts, taped together to create "overhead filmstrips," or used full size on an overhead projector.
- Original text or graphics should be created using carbon-based drawing tools, soft lead pencils for example, or originals can be photocopied to create a carbon-based original ready for thermal transfer.

Still Camera-Captures images on photographic film or digitally on computer disks.

- These images can be captured on different types of film for specific applications such as slide presentations or photographic prints.
- Transparency film allows users to create color slides for use in slide presentations.
- Print film allows users to capture images on negative film for use in making photographic prints.
- High contrast films are used to create title slides or special effects for slide presentations.

PRODUCTION:
Equipment used to create student productions and teacher-made materials that supplement instruction. As in all use of print information, individuals must abide by copyright restrictions in the reproduction of copyrighted materials.



- Special cameras designed to interface with computers allow users to capture still images onto computer disks. The "still video" image can be used in desktop publishing or other computer applications.

Computer-Microcomputers serve a number of functions in helping students in production projects and teachers in developing and producing instructional materials.

- Computers can be used to capture, create, and/or alter graphic images.
- Computers can be used to compose and edit student text to produce reports, newsletters, brochures, literary magazines, etc. (Desktop Publishing)
- Computers can be used to manage video presentations.

Printer-Used to produce printed copies of computer output. The nature of the output will vary from text and data, to print shop quality publications, to graphic images.

- *Dot matrix* printers are the least expensive and most commonly used printers. They print by using pins and an ink ribbon to print small dots on the paper. The dots are shaped into letters, numbers, or pictures. Most dot matrix printers use both single sheets and fanfold paper.
- *Laser* printers produce high quality output by utilizing technology similar to photocopiers. They use toners instead of ink ribbons and will print only on single sheets of paper. A separate feed tray or a manual feeding option is necessary for legal size paper.
- *Inkjet* printers, which squirt small dots of fast drying ink on the paper, are less expensive than laser printers and produce nearly the same quality. Inkjet printers use ink cartridges instead of ribbons.
- *Plotter* printers are output devices that draw complex graphics using moving ink pens. *Plotters* are often used with CAD/CAM systems.

CD-ROM- (compact disk-read only memory) Holds clip art that can be used to create printed materials. A CD-ROM drive connected to a computer is required to access the images.

Digitizer-Translates images and sound into computer data. When an image or sound is digitized, it can be altered or enhanced with the use of graphic or sound editing software. Digitizers usually connect to the computer through a special interface card or through the printer or modem port. Images or sound are usually digitized so that they can be added to printed outputs such as newsletters, brochures, or instructional materials.

- *Flatbed scanners* are the most common image digitizers. A flatbed scanner (which comes with necessary software) will digitize printed images such as photographs, art work, and printed pictures. With optical character recognition software, a flatbed scanner can also digitize a printed page and convert the text into an ASCII file. The ASCII file can then be imported into a word processing program.
- A video *scanner* is connected to a video camera so that the image captured by the camera is displayed on the computer screen. The software is usually included with the scanner.
- *Still cameras* digitize and store their pictures onto a diskette rather than film. Normally the camera is connected and displayed through a television. It can also be connected to a computer so that the digitized image is copied to the computer's disk.
- *Sound digitizers* capture sound so it can be replayed, manipulated, and stored. Digitized sound can be recalled from storage and integrated into student productions or teacher presentations.

Video Overlay Card-A circuit board installed in a computer. This card enables users to superimpose computer generated text and graphics onto existing video images.

- Video overlay cards are most often used with multimedia applications. This might involve the use of a laserdisc presentation with teacher developed text and graphics superimposed (overlayed) onto the video image.

Television Monitor/Receiver-A display device capable of converting a video signal into a visual image.

Video Camera-An audiovisual device used to record live action or other images onto videotape as part of student or teacher productions.

- Camcorders (combination video camera and videocassette recorders) are portable, easy-to-use alternatives to bulky, expensive studio, tripod cameras.

Videocassette Recorder-An audiovisual device that records and plays back sound and video onto a television receiver/monitor from broadcast television or other sources such as video cameras or videodiscs.

Videodisc Player-An audiovisual device used to access videodiscs (metal discs resembling a phonograph record). A videodisc player uses low-intensity laser beams to retrieve sound, still pictures, and full motion video and display them on a television monitor/receiver.

- In student productions, images from a videodisc may be presented under the control of a computer or copied onto videotape.

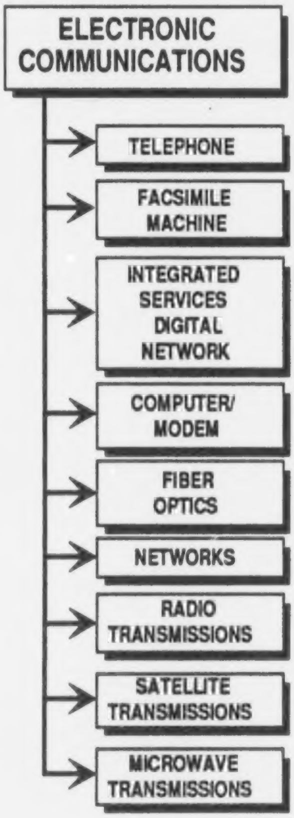
NOTE: Users must abide by copyright restrictions in the reproduction of copyrighted materials.

- Authoring systems and hypermedia applications can be used to direct the presentation of videodiscs. A computer program can be purchased or written that allows the student to control the presentation either directly or through his/her answers to questions.

Other types of production equipment commonly found in schools include, but are not limited, to the following:

- **Camera, Motion**
- **Copier**
- **Copystand**
- **Darkroom Equipment**
- **Dry Mount Press**
- **Duplicator, Spirit or Mimeograph**
- **Laminating Machine**
- **Lettering Device**
- **Slide Viewer/Sorter**

ELECTRONIC COMMUNICATIONS: *Equipment required for the electronic transfer of information between the school and various locations outside the school. Voice, data, or video transmitted by wire, cable, or through the air.*



Telephone-A familiar device used to send and receive messages over long distances. Telephone access is essential to a strong media and technology program. The library media center should have more than one telephone line to provide the vital link in the exchange and access of information (i.e., telecomputing) not located at the local site.

- The local telephone service may have an impact on a school's ability to use telecommunications. Work with building/local administration and telephone company to get as "clean a service" as possible for the dollars spent.
- Depending on services and size of the media center, a cordless telephone might offer increased flexibility.
- Schools using a central switchboard should be able to isolate at least one of these lines to support special purposes that require an uninterrupted line (i.e., FAX, DLS teleconferencing, media automation, and telecomputing).
- The school's PBX should be expandable—capable of adding on media retrieval commands and controls without major replacement of components.

Facsimile Machine-A telecopying device or FAX that electronically transmits or receives written or graphic material over telephone lines to produce a hardcopy at or from a remote location.

- If an isolated telephone line is not available for the FAX machine, a switching device is needed to allow the machine to distinguish between voice and data.
- The FAX machine can be used to promote resource sharing among schools.

NOTE: Care must be given to observe the requirements of the copyright laws.

Integrated Services Digital Network-A special (ISDN) service offered by the telephone company that is being used by large businesses and institutions. An ISDN network allows users to send voice, data, and video over the same lines simultaneously. This service requires special telephones.

- You can use ISDN services only as a sender if the receiver is also subscribing to ISDN.

Computer/Modem-A computer, when equipped with a modem, will serve as a communications terminal. A modem is an electronic device that translates a computer's signal to a signal that can be carried over a telephone line. Communication software is required to use the modem.

- Modems can be one of two types: internal modems are circuit boards installed inside the computer, external modems connect to the computer either through a modem port or an interface board installed inside the computer.
- Modems permit users to gain access to an on-line database or other computer-based telecommunication services.

Fiber Optics-Hair-thin, flexible glass rods that use light to transmit audio, video, and data signals form fiber optics cable. Fiber optic cable is unaffected by corrosion, electrical interference, or moisture. An advantage to using fiber is its ability to carry high quality transmissions over long distances.

Networks-Telecommunication systems linking a combination of computer and communication technologies over distance for data exchange, bulletin board services, and electronic mail.

The host computer, network software, and telephone access must support planned activities and future growth. Local personnel should be sufficiently trained for the most effective use of the network. Security is a consideration in certain applications involving student records or other private information.

Radio Transmission-Voice, data, and video put on an FCC assigned "channel" and transmitted through the air to a receive station.

Satellite Transmission-High frequency radio waves used for point-to-point communication of audio, data, and video signals via a geosynchronous satellite. Satellite transmission requires direct "line of site" between transmitter/satellite and between satellite/receiver.

Microwave-High frequency radio waves used for point-to-point and omnidirectional communication of audio, data, and video signals. Microwave frequencies require direct "line of sight" from transmittor to receptor for operation. A specific microwave frequency range reserved for educational use is Instructional Television Fixed Service (ITFS).

CAI stations may exist in a variety of configurations, sizes, and roles. A single station may be a stand-alone computer and printer for running instructional software. This single computer system may be located in the library media center or in a classroom where it is used for individualized and small group instruction. These CAI stations may also be part of a network, sharing software and data with computers in other parts of the campus. CAI stations can be part of a lab located either in the library media center or in a designated computer room where class groups can be scheduled for instructional activities.

Many schools are beginning to use smaller, battery powered laptop computers. These can be checked out from the library media center by teachers for computer activities in the classroom and by students for home use. An even smaller computer, the palmtop, is now beginning to be marketed. Usually weighing less than a pound, many use a stylus instead of the keyboard for entering text. The user writes on the screen, then the computer converts the writing to text.

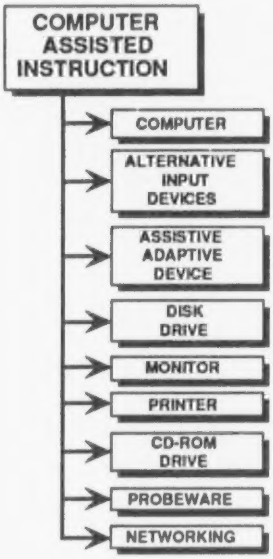
CAI Stations will consist of:

Computer-Should be selected on the basis of compatibility with the desired software. First, decisions should be made as to the instructional activities to be performed and the software that will be appropriate for those activities. Then a computer that is compatible with the software should be selected. Compatibility with other computers in the school should also be considered so that software and peripherals can be shared.

Alternative Input Devices-The keyboard is the most commonly used device for putting information into the computer; but a growing number of computers and applications require other input devices:

- **Mouse**-A hand-movable device for moving a cursor or other object on the display screen. A typical mouse has one or more buttons on the top of a small box that can be moved on a flat surface. The box is connected to the computer by a long cord. As the mouse moves, the cursor moves correspondingly on the screen, the buttons being used for specific actions.
- **Track ball**-A device used to move the cursor on a computer display screen. It consists of a mounting, usually a box, in which a ball is set. As the user spins

COMPUTER ASSISTED INSTRUCTION (CAI):
The use of computers to augment individual instruction by providing students with programmed sequences of instruction under computer control.


COMPUTER ASSISTED INSTRUCTION
COMPUTER
ALTERNATIVE INPUT DEVICES
ASSISTIVE ADAPTIVE DEVICE
DISK DRIVE
MONITOR
PRINTER
CD-ROM DRIVE
PROBEWARE
NETWORKING

the ball, the cursor moves at the speed and in the direction of the ball's motion.

- **Touch Sensitive Screen**-A computer screen that can detect the point at which it is touched by the user.
- **Graphic tablet**-A flat, board-like object that, when drawn upon, transfers the image to a computer screen.

Assistive/Adaptive Device-For exceptional students, traditional input/output devices may not be appropriate. Some special devices for these students commonly found in schools include, but are not limited to, the following:

- Pressure-sensitive membrane keyboard
- Voice recognition device
- Adaptive firmware (interface cards)
- Voice synthesizer
- Head pointer/wand
- Joystick

Disk Drive-Recent improvements in disk storage have contributed to the problem of disk and disk drive incompatibilities. It is important to have some computer systems in the school that can transfer software and data files from one disk format to another.

Monitor-Should be color in all cases. If ordering an MS-DOS computer, you should select a VGA monitor. Instructional software for MS-DOS machines will increasingly require this type of monitor.

Printer-Depends on the activities to be conducted on the CAI station and the amount of use expected. If the printer is to be used only for reporting student progress, then a basic dot matrix printer will be sufficient. If student desktop publishing and graphics projects are to be printed, then an inkjet or laser printer should be used (See the previous section on Production Tools).

CD-ROM Drive-Can be used on a CAI station where applications require accessing large amounts of information or very large programs.

It is important to first select the CD-ROM application to be used at the CAI station, and then a CD-ROM drive that is compatible. These specifications will determine the type of computer that will be required to run the CD-ROM drive.

Probeware-Consists of various sensory devices that allow students to use computers to monitor scientific experiments. The following sensors send data to the computer where it can be displayed or graphed on the screen or on paper:

- Temperature
- Sound
- Motion
- Light

Select the probeware first and then select the computer system that is compatible with it.

Networking-Allows many computers to access software and data from a central file server (a dedicated microcomputer) or from each other. Additional features, such as E-Mail, would also be possible. The selection of a networking system will depend on the types of computers being used and the distance being covered.

CAI Applications

A common thread that runs through all CAI stations is that they all serve as instructional tools. Since new instructional applications for computers are being found almost daily, the following examples can only be considered a partial listing.

Drill and practice applications consist of software that presents a question or problem for the student. The student types in the answer, and the computer immediately responds by indicating if the answer is right or wrong. Many drill and practice programs will then provide a tutorial on how to obtain the answer and will also record the student's progress and produce reports for the teacher.

A computer simulation models a real situation. Students can learn by interacting with the simulation and observing the consequences of their decisions. For example, students may perform chemistry experiments that would otherwise be too expensive or dangerous; or, students may practice making business decisions using a corporate simulation.

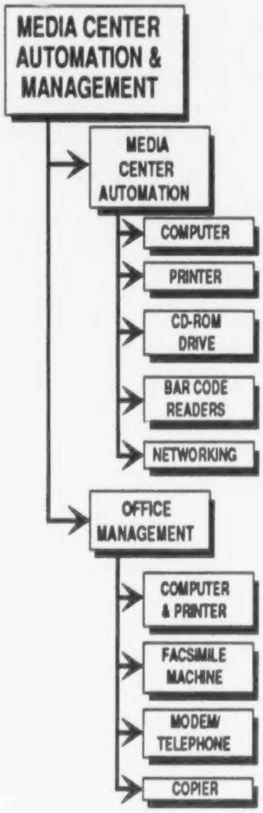
Information management software, such as database and spreadsheet applications, involves students in using the computer to view, analyze, manipulate, and make conclusions based on information. Database software is used to record, organize, and provide access to information. For example, students might be asked to use a database of the nations of Asia to conclude if the standard of living in totalitarian countries is better or worse than that of democracies. Spreadsheet software arranges data and formulas in a columnar format and is used to perform large, repetitive calculations. Students, for example, might be asked to use a spreadsheet program to compute projected election outcomes based on the results of an opinion poll.

Word processing capabilities at CAI stations can be used for a variety of reasons such as working on research papers, reports, essays, homework assignments, and special projects. Word processing software may also be used to help students improve their writing skills. In addition, simple desktop publishing programs can be used with beginning word processing activities to help produce a polished look to student writings.

Probeware is special sensory equipment that science students can use. Connected to a microcomputer, these instruments allow students to track the progress of their experiments by measuring such things as temperature, acidity, motion, sound, and light.

An *Integrated Learning System* (ILS) is a local area network using a comprehensive instructional management system. More than half of the curriculum courseware is published and sold by the ILS vendor. It can be used by all or selected students in the school with special needs to reinforce classroom instruction. The software introduces the students to instructional material, records the progress made by individual students, and prints various reports for teachers and administrators. It will also allow students to move from level to level based on their performance.

MEDIA CENTER AUTOMATION & MANAGEMENT



As a result of the explosion of information and the growing importance of addressing the use of information within the curriculum, the media center, just like other work areas today, has become increasingly more automated. The following technologies will assist the media coordinator in managing the operation of the school library media center.

MEDIA CENTER AUTOMATION

Computer-Will assist the media coordinator by automating the circulation process and the students by providing access to electronic card catalogs.

Printer-A variety of printers need to be available to the media coordinator to print information and reports. Printers need to be part of online/electronic catalog search stations for users to print results of online searches.

CD-ROM Drive-A CD-ROM Drive should be available to the media coordinator in order to perform retrospective conversions and to access CD-ROM-based union catalogs and various massive databases.

Bar Code Reader & Light Pen-A special scanner than can read bar codes from books and student library cards. It may be connected to a stationary circulation system or to a portable computer and used in various locations within the media center. Some varieties can be disconnected from the computer, used in the media center (for inventory, etc.), and then re-connected so that the data can be fed back into the computer--greatly decreasing the time involved in circulation management.

Networking-Usually involved when a media center is using both automated circulation and cataloging. The two systems must be connected so that they can share information. Remote catalog search stations must also be connected to the central file server.

OFFICE MANAGEMENT

Computer & Printer-Computers and software applications can assist the media coordinator in office management:

- Word processing for typing memos, letters, and reports.

- Spreadsheet software for generating and managing budgets.
- Database software for recording and managing large amounts of information.
- Automation software modules for acquisition and inventory.

Facsimile Machine-(FAX) Allows media centers to conveniently share resources across distances.

Modem/Telephone-A computer, when equipped with a modem, serves as a communications terminal. Modem-equipped computers can be used to access online databases, support services, and exchange information with other media professionals.

Copier-Assists the media coordinator in sharing information throughout the school if the entire school is not networked.

ASSESSING YOUR PROGRAM

What is the status of this component of your media and technology program? By answering the following questions, you can begin to collect the information you need for the implementation of a local planning and assessment model. For further information about the process, refer to the Planning and Assessment chapter.

RESOURCES

1. **Are all materials readily accessible to students?**
2. **Are materials processed, organized, and kept in reasonable order?**
3. **Are all instructional materials in the school inventoried through the media center?**
4. **Is there a good balance of non-print and print materials?**
5. **Do materials reflect the curriculum and intended users?**
6. **Are materials and equipment kept up-to-date and in a state of good repair?**
7. **Is the entire school staff familiar with the Selection Policy approved by your local board?**
8. **Are all resources cataloged with cards filed in an up-to-date card catalog or entered into an automated catalog system?**
9. **Are provisions made which allow access to resources located outside the school library?**
10. **Do students and teachers have opportunities to produce their own materials?**
11. **Does the collection include new formats and delivery systems?**
12. **Does the collection include professional materials for classroom teachers?**

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Budget

INTRODUCTION

Budgeting is the financial component of planning and should reflect the overall goals of the individual school's instructional program. In its broadest sense, budget is the translation of programs into dollar amounts. Effective budget building is a continuous sequential process involving three elements:

- *Establishing the education plan, expressed as goals and objectives*
- *Determining sources of revenue available to finance the plan*
- *Converting the plan into cost terminology*

The process may be divided into four major steps:

- *Preparation*
- *Presentation*
- *Administration*
- *Evaluation*

> *"Administrators must cease thinking of the library media center as a fixed asset. . . The school community must look at the library media program as part of its instructional delivery system and fund it appropriately."*
>
> Miller, 1991, p. 47

The media coordinator, in a leadership role, seeks the support of students, teachers, and administrators within the school to assure appropriate consideration of the budget requests, which are intended to meet program goals and objectives. S/he seeks support in the community through public relations strategies aimed at heightening awareness of the need for a wide variety of up-to-date resources to extend and enrich learning opportunities.

SCHOOL-BASED DECISION MAKING

School-based decision making is a growing practice in North Carolina. Active involvement of the site-based school improvement team in planning and implementing the local school budget can result in the most effective use of instructional dollars. The school media coordinator should serve as an active member of the site-based management team.

The site-based management team:

- Discusses the needs of the school program
- Sets overall goals and objectives
- Works with departments/grade levels in developing budget needs lists
- Generates priority list for media expenditures

- Directs the Media Advisory Committee to administer funds for the selection and purchase of media with capital outlay, state allotments, and other funds in accordance with standard selection procedures
- Communicates the merit of access to a wide variety of resources through coordination of selection and acquisitions procedures across the school

PLANNING

In the budget planning process for the library media program, the Media Advisory Committee works to develop a budget that establishes the media program's direct relationship to the instructional program, considering:

- Overall mission statement of the school
- School's long- and short-range goals and objectives
- Long- and short-range media program goals and objectives
- Specific curriculum needs and grade configurations
- Teaching methodologies and student learning styles
- Strengths and weaknesses of the existing collection
- Regional and state accreditation standards
- State and national guidelines
- Priorities set by Media Advisory Committee in conjunction with teacher and student recommendations
- Necessary cycle for replacement and updating of materials and equipment
- Average costs of items

The planning process identifies the financial requirements for implementing a desirable instructional program in the school (See **Budget Planning Strategies**; **Library Media Budget Planning**; and **Sample Budget Worksheet** in the Budget section of the Appendix). The next step is to identify sources of revenue available to fund the plan.

SOURCES FOR ANNUAL EXPENDITURES

Federal, state, and local funds should be allocated to purchase adequate materials, equipment, and supplies necessary for an effective library media program.

FEDERAL FUNDS

Federal funds are appropriations of federal categorical money made available to school systems through the Department of Public Instruction.

ESEA Chapter 2 Funds are those most often used at the local school level to provide instructional media to enhance learning. The Elementary and Secondary School Improvement Amendments of 1988 (PL 100-297) provide funds which may be related to media programs and provide materials for:

- Programs to meet the educational needs of students at risk of failure in school and/or dropping out, and students for whom providing an education entails higher than average costs
- Programs for the acquisition and use of instructional and educational materials, including library books, reference materials, computer software and hardware for instructional use, and other curricular materials that would be used to improve the quality of instruction
- Projects which would enhance the educational program and climate of the school; innovative projects such as those for the gifted and talented, technology education, community education, and youth suicide prevention (NCDPI, 1989, pp. 1-2)

The school's Media Advisory Committee should be fully informed of all funds available so that it can set priorities for the expenditure of all funds based on predetermined school needs and a carefully developed plan for collection building and maintenance.

The application form calls for:

(1) Goals and Objectives (stated in measurable terms to determine student achievement gains and improved quality of a local program)

(2) Program, Projects, Activities to Implement Objectives

(3) Reason for Selection of Objectives

(4) Data to be Collected to Determine Effectiveness of Local Program

STATE FUNDS

State funds are appropriations for the current operating expenses of the public school system from the monies available to the local education agency (LEA) by the Department of Public Instruction.

In January 1986, the BASIC EDUCATION PROGRAM specified, "Funds for instructional supplies and materials will be allotted in the amount of $25 in constant (1985) dollars for each student in average daily membership." Constant dollars means that the 1985 allotment is adjusted for inflation.

The BASIC EDUCATION PROGRAM (January, 1986) also specified, "An additional five dollars will be provided for each student in ADM for instructional equipment, including but not limited to math and science, and also an additional five dollars for every student in ADM in grades 7-12 for vocational equipment in constant (1985) dollars." This allocation is based on the best continuous six of the first seven months ADM of the preceding school year in grades K-12.

The responsibility for allocation of all state funds and selection of appropriate instructional materials rests with the system-level administration. School personnel will need to be familiar with North Carolina Purchase and Contract regulations when planning and expending funds. (See **State Contract Purchasing Procedures** in the Resources section of the Appendix.)

LOCAL CURRENT EXPENSE FUNDS

Local current expense funds are appropriations for the current operating expenses of the LEA. It can include, but is not limited to, revenue from fines and forfeitures, county appropriations for current expenses and supplemental taxes levied for current expenses. Appropriations are made by county commissioners to individual LEAs.

CAPITAL OUTLAY FUNDS

Capital outlay funds provide initial collections of print and nonprint media in new or newly reorganized schools; installation of electronic security systems, automated delivery systems, television reception and distribution systems; library furniture; and special production equipment.

Capital outlay funds are used when buildings are remodeled or existing media center facilities are modernized.

OTHER FUNDING SOURCES

Media coordinators must become creative in their approach to seeking funding for library media programs. Consider the following possibilities:

- Grants
- Partnerships with business and industry
- Memorial donations (money rather than materials)
- PTA support
- Eisenhower Math and Science Grant
- Chapter 1 funds
- Vocational Education money
- Exceptional Children allocations

ADMINISTERING THE BUDGET

After the sources of funding have been identified and allotted, the media coordinator assumes responsibility for administering the budget. The LEA's Selection Policy, the school's Collection Development Plan, and the annual budget allocation are the tools the media coordinator and the Media Advisory Committee use to acquire appropriate instructional resources each year.

The media coordinator is obliged to inform the staff and administration about the status of the budget periodically; to make recommendations for modifications; and to solicit input. This information is often communicated during meetings of the Media Advisory Committee and/or site-based management team.

Accurate accounting procedures are necessary. The media coordinator establishes a simplified bookkeeping system and keeps records up-to-date in order to be accountable for the expenditure of funds (See **Sample Budget Worksheet** in the Budget section of the Appendix).

National, regional, and state standards and guidelines are helpful to professionals during the planning and evaluation phases of the budget process.

NATIONAL
Information Power,
1988, p. 50

At the building level, the head of the school library media program develops the individual school's library media budget, in cooperation with the principal and the district program director. The library media advisory committee would be included in the budget process; its active participation is an extension of the planning and evaluation process. It also encourages continued support for the jointly developed library media program goals and objectives.

Decision formulas that provide assistance in identifying factors to consider, as well as a process for calculating budgetary needs for materials and equipment, are included in Appendix B [of *Information Power*, pp. 124-130].

REGIONAL
Southern Association
of Colleges and
Schools or SACS

Commission on Elementary Schools

(1990-91 Checklist)

Standard H.5: There shall be evidence of sufficient financial support for the school library/media center. Such financial support shall be budgeted and expended annually through the business office of the school/system for the purchase of library books, periodicals, audio visual materials, and computer software (p. 29).

Commission on Secondary Schools

(1986 Guidelines)

Standard 6.3.5: A systematic program for the replacement of obsolete or inoperative equipment and furniture shall be maintained (p. 15).

Standard 7.1.2: A balanced program of expenditures for instructional materials and supplies shall be planned so that annual expenditures facilitate the maintenance of quality in each area of the school's program (p. 16).

Standard 7.3.1: In school systems, resources shall be appropriately allocated among all schools according to the best interests of the students served (p. 16).

Standard 7.3.4: After the basic book and nonprint materials collections are established, each library or instructional materials center shall be provided with funds on an annual basis as indicated [below] for the purchase of library books, periodicals, library supplies, and nonprint materials (p. 17).

Membership	**Expenditure Requirements***
Fewer than 100	$500
101-800	$500 + $4.00 per student in excess of 100
801-1000	$500 + $4.00 per student in excess of 800
1001-1500	$3300 + $3.50 per student in excess of 1000
1501 - 2000	$5850 + $3.50 per student in excess of 1500
2001- and above	$7600 + $2.00 per student in excess of 2000

*These requirements may be met by averaging expenditures over the three most recent consecutive years provided the school does not get in debt to the standard. In school systems that provide a centralized service for processing media materials, a school may include a prorated share of the value of that service in meeting the expenditure requirements.

STATE

North Carolina's movement to site-based decision making must be considered when developing the media budget. Changes in state policy regarding fund allocations will have an impact upon availability of monies for specific areas.

Regardless of the current educational philosophy, however, at least 60 percent of the per pupil allocation should be allocated to acquire print and nonprint materials of lasting value in order to meet the diverse learning styles and needs of students in North Carolina.

In the Basic Education Program, the 60 percent allocation would be figured in the following manner:

•BEP per pupil x .60 =
•Permanent Print and Nonprint: $25 x .60 = $15 (1985 dollars)
•Consumables $25 x .40 = $10 (1985 dollars)

LOCAL

While local guidelines are determined by individual school systems, the active involvement of the teaching staff in planning and implementing the local school budget results in the most effective use of instructional dollars.

ASSESSING YOUR PROGRAM

What is the status of this component of your media and technology program? By answering the following questions, you can begin to collect the information you need for the implementation of a local planning and assessment model. For further information about the process, refer to the Planning and Assessment chapter.

BUDGET

1. **Is there a functioning Media Advisory Committee in each school?**
2. **Does the media coordinator serve as an active member of the site-based management team?**
3. **Does the budget planning committee begin with the school's instructional needs and state budget requests as outcome measures?**
4. **Does the principal regularly inform the committee responsible for budget planning of the amounts and sources of funding?**
5. **Are at least one-half of all state instructional funds used to purchase non-consumable materials?**
6. **Does the media coordinator maintain up-to-date records of budget plans and expenditures?**
7. **Do the budget line items reflect anticipated expenditures and assumed expenditures, addressing needs generated by the use of newer technologies?**

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Facilities

INTRODUCTION

Media and technology facilities are spaces for the diverse learning activities, resources, equipment, technical functions, and program services that are necessary for dynamic media and technology programs in the schools. Factors that determine the space requirements and design of the facilities include:

- *the mission/philosophy of the school and its media and technology programs*
- *the curriculum, teaching methods, and learning styles*
- *the quantity and format of resources and equipment*
- *the number and age range of the school population*

While meeting **present** needs through the design and construction of new and/or renovated facilities, media and technology personnel should also anticipate the **potential** facility requirements that will occur through growth and development of the program. Because construction occurs infrequently, careful planning by a team of committed individuals is essential to ensure that all current and future possibilities are considered. Although budget constraints can threaten to limit square footage and/or amenities, the trend toward escalating costs indicates that *generous square footage allowances and inclusion of enhancement features will have long-range, cost-efficient benefits.*

In addition to fiscal concerns, the research into the effects of overcrowding on individuals indicates that human behavior is strongly influenced by the amount of personal space allotted each person. Freedom from overcrowded conditions, especially for disadvantaged children, will greatly improve their chances for successful learning experiences. Likewise, the productivity of adults is increased when they are able to temporarily define a comfortable amount of space with limited distractions when performing administrative tasks or planning activities. (Jussim, 1978, pp. 8-9 and Vandergrift, 1978, p. 12).

The infusion of technology into the instructional program influences the design and renovation of media and technology facilities in order to accommodate school-wide networks and to allow access to information sources within the library media center as well as outside the library media center through telecommunications. Computer labs, production facilities, and multipurpose classrooms adjacent to or incorporated within the library media center can increase opportunities for the use of newer technologies.

> *The effect of a media center upon its occupants is the result of a complex set of factors which range from the morale of the staff, the often unconscious influence of its decor and layout, the flexibility of its arrangement, the variety of surfaces, volumes, spaces, textures, colors, and traffic patterns. . . . it may be a good idea to plan the media center from the inside out.*
>
> Jussim, 1978, p. 9

Likewise, expanded hours of operation beyond the regular school day and year may be a natural outgrowth of programs that endeavor to meet the personal and informational needs of students and adults within the school and the local community. To extend this opportunity, accessibility to the media and technology facilities from outside the school plant is a primary consideration.

As media and technology programs endeavor to be the medium for resource-based learning and integrated instruction, the facilities can contribute to or detract from the options that are available to students and staff. Facilities that function efficiently and effectively in meeting program objectives:

- are accessible to instructional areas and to an outside entrance.
- provide a safe, barrier-free, comfortable, and attractive environment that does not hinder free access to resources and services.
- accommodate and promote the use of technology.
- have furnishings and spaces appropriate for the intended users.
- accept large groups, small groups, and independent learners for a variety of activities including: reference services, reading, listening, viewing, computing, telecommunicating, informal reading, studying, production, story sharing, selection, and circulation.
- provide flexibility for multiple uses of spaces and are capable of expansion.
- have adequate space for storing, using, and producing resources and for planning and administering the program services.
- have appropriate electrical power, climate control, light and sound control, telephone lines, telecommunications utilities, water supply, and electrical surge protection.
- have visual control and logical traffic patterns throughout the facility.
- have the necessary means to communicate within the school and outside the school.
- do not limit the scope of activities and services offered through the media and technology program.

Existing facilities can benefit from re-arrangements using the same criteria as those considered for new designs.

Existing facilities can benefit from re-arrangements using the same criteria as those considered for new designs. Analysis of the program requirements, spatial relationships, work zones, traffic patterns, and other factors may indicate areas for improvements.

The purpose of facilities re-arrangement is to create space for new program options and/or the more effective, efficient operation of the library media center, other media and technology facilities, and the related programs.

The challenge to maintain building flexibility continues to be of utmost importance when media and technology facilities are designed.

While exemplary facilities are not exclusively a measure of quality media and technology programs, their potential impact cannot be overstated. Some activities cannot occur without spaces, furnishings, and utilities to accommodate special needs. Designing new, renovated, and/or re-organized facilities requires a thorough examination of the desired program. Thoughtful pre-planning can alleviate potential problems and ensure that the program can develop in the intended ways.

The ability to access information through various media formats is essential if an individual is to be productive in the *Information Age*. Although the diverse activities surrounding the acquisition and use of information require special facility considerations, the challenge to maintain building flexibility continues to be of utmost importance when media and technology facilities are designed.

When designing new or renovated facilities, the planning process focuses attention on the accessibility, flexibility, and efficiency so necessary to provide learning opportunities for students and staff. Although the approach may differ, the same considerations for designing new facilities also should apply to the renovation or re-arrangement of existing facilities.

The Planning Committee

Designing a new or renovated facility or re-organizing an existing facility is not a task for one person. Coordinating the ideas and expertise of a variety of individuals insures that all aspects of media and technology are evaluated properly and incorporated into the facility design. Additionally, the personal likes and dislikes of one person do not become the overriding influence in the design. The following should be represented on the committee:

- Media coordinator
- Computer teacher/coordinator
- Teacher
- Student
- Member of the school board
- System-level building supervisor/plant manager
- System-level media contact/supervisor
- System-level computer and technology contact/supervisor

It may not be possible for all committee members to attend every planning session; however, it is important that each member be kept informed and allowed to have input throughout the planning process.

COMMITTEE CONSULTANTS

In addition to representatives from within the school system, outside consultants may be involved in the planning process. Assistance from the Division of Media and Technology, School Planning, and other Department of Public Instruction areas can be requested at various stages of the project. In some cases, paid consultants may be employed; however, their job qualifications and experience should be verified. To be useful, an outside consultant should have a working knowledge of the school and system-level priorities, be able to offer unbiased opinions, supplement the knowledge base of the Planning Committee, and have expertise in overall facility design and/or a speciality in the specific program area.

COMMITTEE RESPONSIBILITIES

The Planning Committee has a critical role in determining the final outcome of the building project. Responsibilities commonly assigned to the Planning Committee include:

- Carrying out the **Planning Process** (Refer to the section)
- Writing **Educational Specifications** (Refer to the section)
- Reviewing blueprints* throughout the design process
- Checking blueprints* against educational specifications
- Checking utilities and special requirements
- Selecting, arranging, and determining furniture to be purchased
- Determining those features that can be compromised, if necessary, and those features that are absolutely essential to the program
- Making presentations and/or reports concerning the progress of the facility

**"Blueprint" is the layman's term for what architects call "construction documents" or "working drawings."*

COMMITTEE LEADERSHIP

The chair or leader of the Planning Committee (usually the school media coordinator or system-level media director) represents media and technology on the overall facility planning committee and serves as liaison with the architect, the building project coordinator, the finance department, and others involved in the building/renovation process. Specific responsibilities as leader of the Planning Committee for Media and Technology Facilities include:

- Establishing an atmosphere that encourages visionary thinking
- Defining responsibilities for the committee
- Creating a spirit of teamwork
- Establishing a timeline for completing tasks
- Defining terminology
- Providing resources for background reading and study
- Keeping all committee members and other key people informed of progress

The Planning Process

Preliminary thought, work, and investigation are essential to the development of credible educational specifications that will translate into a functional facility design. The Planning Committee should address the following items before it begins writing educational specifications.

DEFINE THE PROGRAM

- Establish a clear sense of the mission of media and technology as interwoven with the mission and goals of the school and school system.
- Study the school and system-level plans for media and technology, curriculum guides and plans, and other related documents.
- Investigate exemplary programs and future plans for restructuring or reforming present programs.
- Examine media and technology applications according to discipline and/or grade level.
- Determine behavioral objectives for students and staff related to media and technology.
- Develop a consensus about the purpose and responsibilities of the media and technology program.

EXAMINE PRESENT FACILITIES AND NEEDS

- Analyze use patterns to determine possible changes for the new facility.
- Examine space and identify features to redesign, add, or keep the same.
- Survey students and staff regarding media and technology needs.

CONDUCT THOROUGH RESEARCH

- Read professional literature on program and facilities.
- Become acquainted with newer media and technology resources and their implications for facility design.
- Window shop. Visit schools with good programs as well as newer facilities; discuss program/facility features with media and computer personnel, students, teachers, and administrators; visit schools designed by the architect. Include the architect on these visits if possible.
- Seek information from the Division of Media and Technology, School Planning (DPI), and other school systems.
- Ask the architect about building trends.

- Dare to dream about the program that could be offered through a state-of-the-art facility.
- Be aware of program, curriculum, and technology trends for the near future.
- Develop a well-reasoned picture of media and technology in the extended future.

DEVELOP A VISION

After completing these preliminary actions, the Planning Committee is prepared to write educational specifications.

Educational Specifications

Educational specifications are developed by the Planning Committee to communicate the function and requirements of each space to the architects, designers, and/or engineers who are responsible for creating new or renovated facilities. Because this detailed description will become the foundation for all further work on the facility, it is essential that every effort be made to describe thoroughly each space and all the desired elements within it. The way that these needs and functions are addressed in the actual facility design should be left to the design professionals.

Local school systems may opt to skip the written educational specifications stage; however, they face a greater risk of dysfunctional facilities if they ignore this important step.

The Development of Educational Specifications School Planning Guide-Series 3R, published by the Division of School Planning, DPI, recommends the following outline to describe the educational activities and user requirements for all instructional programs (pp. 14-17).

I. **Discernible Trends** - major trends in the field of media and technology and how they relate to the curriculum and the facility
II. **Educational Philosophy** - direct and concise statement of beliefs
III. **Specific Objectives** - observable and measurable objectives
IV. **Teaching Methodology** - various ways students will be taught
V. **Main Instructional Areas** - the following descriptors are used to denote each media and technology space to be included in the plan

- A. **Capacity** - maximum number of students/staff expected to use the area at one time
- B. **Student grouping** - group variations that may use the area
- C. **Activities** - describe the various activities that may occur in the area
- D. **Special environmental considerations** - lighting, acoustical, mechanical requirements
- E. **Media and equipment required** - list all equipment and media to be used in the area
- F. **Utilities required** - special utility requirement
- G. **Storage space required** - describe all storage spaces, indicate security needs, dimensions as needed
- H. **Furniture required** - list type, size, quantity
- I. **Miscellaneous requirements** - anything not appropriate in another area

VI. **Peripheral Areas** - areas that are related to or support media and technology functions; describe in as much detail as possible

VII. **Spatial Relationships** - describe relationships among various areas within the library media facility, as well as the relationship of all media and technology facilities to other parts of the school

DESIGN AND CONSTRUCTION PROCESS

School systems manage facility projects in various ways. Some employ an outside consultant to work with the architect, while others designate a staff member to be the liaison between the school system and the architect. The chair of the Planning Committee should identify the school system's project manager and the procedures for communicating during the design, review, and construction process. If possible, the chair should develop a working relationship with the project manager and convey the need for on-going involvement in decisions affecting all aspects of media and technology in the building. Establishing the correct protocol early in the project will improve chances for input throughout all design and construction phases.

The Design Professionals

An architect is hired by the school system to translate the educational specifications into a functional design that meets the program requirements. Some architectural firms employ interior designers to handle a facility's aesthetic treatments and furniture arrangements. Educational specifications should convey to the professional designers a complete and accurate description of the educational program and the factors that affect all aspects of school life. The combined efforts of talented designers and knowledgeable educators are necessary to produce the desired results. The following suggestions may help to establish a positive working relationship with the architect and/or interior designer:

- Know the program and be able to define clearly and interpret concisely its instructional/service needs and aesthetic qualities/treatments that effect design.
- Respect the architect's strict time constraints; answer all questions and complete assignments in a timely manner; be as thorough as possible with reviews to limit the number of redrawings that are required; do homework prior to face-to-face meetings with the architect.
- Learn to read blueprints; learn relevant architectural symbols.
- Convey desired electrical and wiring needs for the use of newer technologies (Refer to **Guidelines to Provide Uniform Wiring Service for Telecommunications in North Carolina Schools,** distributed to school superintendents by DPI, Fall, 1991).

- Ask questions.
- Remember that the architect is the building design expert; respect his/her professional expertise in interpreting media and technology needs.
- Learn to disagree without being disagreeable; justify points of disagreement; accept final decisions.

Design Phases

The architect presents the design in three phases:

- Schematic plans - initial plans for the general layout of the building; the location of major spaces within the building is being established.
- Design development plans - detailed drawings for each area; several re-drawings may occur as changes are made.
- Final construction plans - final blueprints for use by contractors.

The schematic and design development plans are intended as "working" drawings to be reviewed and changed as needed. Together, educators and the design professionals arrive at consensus about modifications to the plans. After all changes are made, a set of development plans is submitted to School Planning (DPI) for review. Suggestions from the Division are then incorporated into the final construction plan. After final construction plans are approved and contracts signed, further revision involves change orders that can translate into additional costs. Therefore, it is imperative that the schematic and design development plans are reviewed carefully so that all changes occur before the final construction plans are completed.

Blueprint Review

Blueprint reviews are conducted throughout all design phases to ensure that the plans reflect the program needs. Reviews may be conducted in several different ways; however, face-to-face discussions with the architect by representatives from the Planning Committee, a DPI consultant, and/or the project manager is the most efficient method of communication. Written suggestions, with follow-up phone conversations, can also be effective.

While visualization of the facility from a two-dimensional drawing may be difficult, a careful review of the plans will lead to constructive suggestions for changes that will be worthwhile when the project is completed. The following may help direct the blueprint review process:

- Compare educational specifications with drawings. Occasionally gaps in the written specifications become apparent when the drawings are reviewed. Discuss this with the architect and clear up any confusion.
- Use **A Checklist For Media and Technology Facilities** in the Facilities section of the Appendix.
- Check for wasted space (Hallways within the media and technology facilities can and should be minimized, if not eliminated).
- Attempt to visualize working in the facility. Take an imaginary walk-through and check these and other common activities from the staff and student perspective:
    - Answering the phone
    - Reading a magazine
    - Plugging in equipment
    - Using audiovisual media for large groups
    - Producing a videotape or other media
    - Teaching a lesson
    - Accessing the catalog
    - Doing an on-line search
    - Using a word processor for a research paper
    - Processing new materials
    - Selecting and checking out a book or other media
- Check accessibility for physically disabled persons.
- Look for the degree of flexibility in the uses of space (Fewer walls between areas open re-arrangement possibilities; there is a distinction between "areas" and "rooms").
- Examine traffic patterns and visual controls.
- Read all the blueprint pages for media and technology facilities that may be located in different sections of the total blueprint package including:
    - Electricity and lighting
    - Designs for built-ins
    - Telephone
    - Networking (computer, closed-circuit TV, etc.)
    - Elevations (distance between floor and bottom of windows)
- Examine the entire building for media and technology needs:
    - Networking—distribution of data, voice, video, satellite
    - Placement of screens and other viewing surfaces (Refer to **Ergonomics** section)

- Lighting that does not hinder use of technology
- Electrical needs for technology
- Equipment storage
- Supplementary materials storage
- Telephone lines
- Teacher work and production areas
- Student production facilities (in art, industrial arts, etc.)

ARCHITECTURAL SYMBOLS

Recognition of common architectural symbols will facilitate the blueprint review process. *Architectural Graphic Standards,* published by the American Institute of Architects, identifies all standard architectural symbols. Most architects will have an up-to-date copy. When in doubt, look for legends that define the blueprint symbols for each layout, or ask questions.

CHANGE ORDERS

Changes can occur at any time after final construction plans are approved. An on-site review of construction may point to changes that are needed; however, changes requested by school system representatives might accrue additional costs. If the contractor has neglected to follow the plans accurately, the contractor must absorb the costs for changes. It is imperative to follow protocol if construction errors and omissions are noticed. Rather than confronting the construction foreman directly, the Planning Committee chair should relay concerns to the school system representative in charge of the project.

Inspection Process

There should be on-site checks of the building by school personnel during construction. Any discrepancies between blueprints and actual construction that are noticed should be handled following correct protocol. At the end of constructon, a final walk-through inspection involving school officials and the contractor is conducted. The purpose is to create a "punch list" of changes that must be done to fulfill the agreements established among all parties. At this point, minute details are often discovered that require adjustments. During this phase, attention to utilities and other aspects affecting the use of technology are of particular concern for media and technology programs. It is highly advisable for a representative from the Planning Committee to participate in the final building inspection.

DESIGN CONSIDERATIONS

Access

Before intellectual access to information can occur, physical access must be addressed. A highly accessible facility can maximize services and the use of all available resources.

LOCATION

The media center should be:

- One level
- Located on the ground floor
- Convenient to instructional areas without being a thoroughfare
- Convenient to an outside entrance, restrooms, public telephone, (and an elevator if two floors) for extended hours of operation and to expedite deliveries
- Accessible to the administrative suite
- Designed with possibilities for future expansion

DISABLED USERS

In accordance with Public Law 101-476, Education of the Handicapped Act Amendments 1990 (revised from P. L. 94-142), media and technology facilities must be barrier- free and able to accommodate wheelchairs and other devices used by disabled persons. Public Law 99-457 extends the provisions to 3-5 year olds in early intervention programs. Section 661 of the law refers to access to resources and the use of assistive devices. Section 504 of the Rehabilitation Act of 1973 concerns the civil rights of physically impaired individuals who are not instructionally/mentally disabled. The following points ensure compliance with the codes:

- At least one 10' x 10' area accessible for wheelchairs
- At least one desk/table with separate chair must be available
- Minimum distance between floor and bottom of table/carrel/counter—28"
- Maximum reach height 36"; catalog, magazines, dictionary stands and reference stacks should be within reach
- Minimum distance between tables and other furniture -4'-6'
- Aisle access between tables and other furniture - 7'
- Side aisle minimum clearance - 6'
- Minimum door width - 32"
- Kick plates for doors
- Lever-type door handles rather than doorknobs

- No thresholds on doors
- Mechanical lift or ramps for steps over 30" high

EXPANDED USE

Access to computer labs, media resources, and distance learning equipment during the summer, holidays, and after the traditional school day extends the potential of the media and technology facilities for students, staff, and the community. To make this possible, these facilities must be:

- Located near an exit to the building
- Accessible to restrooms
- Secure from other areas of the building not in use
- Accessible to a public telephone

SIGNS

Appropriate signs can greatly encourage independent exploration as well as speed access to materials.

- Identify all areas with signs.
- Label individual shelves, cabinets, drawers, and other storage units.
- Label sections of workroom containing work-in-progress.
- Use signs for specific instructions in using various media and equipment.
- Provide signs that are clear, concise, large enough, and attractive (Refer to the **Aesthetics/Atmosphere section**).
- Use commercially-made, computer-generated, or other homemade signs.

YOUNG CHILDREN

To be in compliance with *North Carolina State Building Code, Vol. 1: General Construction* (1991) Section 406.2.1, media and technology facilities must:

- Be on a floor with direct outside access for Pre-K-1
- Have outside access no more than one story above the ground for second grade students

ACCESS SPACE

	Minimum	Preferred	Wheelchair Access
Between rows of shelves	3'	4'6"	5'6"
Between rows of shelves and seating	4'6"	4'6"	5'6"
Between tables with back to back seating	4'6"	5'6"	5'6"
Between shelves and other furniture not involving seating or traffic	3'	3'6"	4'6"
Between wall and shelving perpendicular to wall	3'	3'6"	4'6"
Aisle for traffic flow	3'	5'	7'

Aesthetics/Atmosphere

Attention to the environment is influenced by personal taste, but individual preferences should not be the prime consideration. When planning media and technology facilities—particularly the library media center—attempt to make the surroundings:

- Adaptable; aesthetic treatments should not preclude changes or replacements that may not match exactly.
- Conducive to learning; aesthetic treatments should blend without being overpowering or distracting.
- Comfortable and inviting; consider the preferences and needs of the users that may influence the use of the facility.
- Congenial with other parts of the building.

Display space can be used to enhance the aesthetic as well as instructional environment by using plants, terrariums, aquariums, and/or small live animals; however, maintenance time and costs should be considered. Art work can contribute to the overall atmosphere and should be changed from time-to-time. Aesthetic treatments which can be built into the design include *ceiling heights, color, textures and surfaces.*

CEILING HEIGHTS

Usually the larger the open space, the higher the ceiling can be; however, this may or may not be appropriate for the library media center, especially if it is built for primary children. Entering a vast space can be a frightening experience; therefore, it is imperative to use ceiling heights to develop a sense of intimacy without allowing it to become claustrophobic. The following alternatives for adjusting ceiling heights are suggested:

- Ceiling heights may vary with the age of students.
- Ceiling heights may vary within different areas of the facility.
- Lofty ceiling heights should be avoided in a facility designed for primary children.

COLOR

- Use bold colors sparingly as accent pieces, or choose bold colors that can be mixed easily with other colors.
- Use colors that complement or blend with other colors.
- Consider the mix of wood, metal, laminated materials, glass, window coverings, and other surface colors.
- Check colors under the conditions in which they will be used because sources of light affect colors.
- Use blue hues for video backdrops.
- Investigate the psychological affects of colors that can influence behaviors.
- Consult the school art teacher and other staff for color suggestions.
- Lighting has color of its own and may produce different effects depending on the type of lighting used and whether it is direct or indirect.

TEXTURES AND SURFACES

- Large weave fabrics for furnishings are more puncture-proof than non-woven fabrics.
- Vinyl coverings for floor furniture are advisable because they slide across the carpet and can be cleaned easily.
- Variegated, laminated surfaces hide signs of wear better than solid, dark colors.
- Select stain and scratch resistant materials for furnishings, floorcoverings, and built-ins, especially sinks and countertops.
- Floor coverings may differ according to use. Instructional and administrative areas and other areas needing noise control require carpeting. Equipment storage, computer, and some production areas may benefit from tile or vinyl flooring.
- Alternatives for walls include brick, concrete block, stucco, glass bricks, vinyl, and carpet. Select walls and/or wall coverings that are specific for the intended use. Dry wall with painted or papered surfaces is the least durable.

Ergonomics*

Ergonomics is related to aesthetics/atmosphere because it affects the personal comfort of the users. To maximize use of the facility, consider the following:

- Appropriately sized furnishings scaled for the intended users. One size does not fit all. Attempt to provide alternative sizes as needed, particularly in student work and study areas.
- Appropriate relationships of furnishings for different activities (i.e., providing a computer keyboard that is within comfortable reach and a monitor that is at eye level requires lower-than-normal work surfaces and raised monitors. Attached peripherals should be within easy reach).
- Padded seating, especially for middle grades students.
- Formed seating that encourages appropriate posture.
- Placement of viewing screens, monitors, etc., at proper viewing angle and height (wall or ceiling-mounted screens span a wider, less-obstructed view when placed at a comfortable angle to the audience).

Ergonomics
is the science that emphasizes safety and comfort in using human-operated machines. Examples include numeric keypads on standard keyboards, nonglare display screens, etc.

Mechanics/Engineering

Because adherence to building codes for mechanical features may not be sufficient to cover the program requirements, attention to the following details will dramatically affect the operations within the facility. These features should be outlined in the educational specifications and checked throughout the blueprint review process. Consult *Guidelines to Provide Uniform Wiring Service for Telecommunications in North Carolina Schools*, DPI, 1991, for further information.

LIGHTING

- Master control switch should be located conveniently near main entrance.
- Separate lighting zones will allow darkening/dimming in specific areas while other areas remain lighted. Separate controls should be located within each zone.
- Natural light control should be provided for all areas. Blinds, draperies, shades, or other applications are needed for all openings emitting natural light.

ACOUSTICS

- Noisy activity areas such as the cafeteria, music rooms, theaters, dressing rooms, or the gym should not be adjacent to media and technology facilities.
- Acoustical treatments are needed to counter noise within and outside the facility: carpet, ceiling tiles, baffles, adequate space between areas, and wall treatments.
- Audio booths require additional sound dampening treatments.

CLIMATE

- Heating, ventilation, and air conditioning (HVAC) controls should be on separate switches from other sections of the school.
- Moisture and temperature control is needed to preserve sensitive audiovisual resources, computer software, photographic supplies, and equipment.
- HVAC systems should adequately control humidity during periods when the building is not occupied and the cooling loads are reduced.

ELECTRICAL

- Sufficient numbers of accessible outlets in each area should be determined by activity requirements.
- Surge protection is needed for computers and peripherals.
- Adequate number of circuits is necessary to distribute electrical load in all areas, especially in production and computer areas.
- Dedicated, isolated, or direct telephone lines will be needed; the type of line will be determined by the type of transmission: voice, data, or satellite.
- Surge protection should be placed on communication lines.
- Conduit/wiring should be laid in order to accommodate library automation, as well as networking with classrooms and locations beyond the school.
- Conduit/wiring should be laid to accommodate instructional/administrative computer and other LANs (local area networks; networks within the school).
- A distribution system for video signals via MATV, CCTV, cable, or satellite into the media facilities and throughout the school should be considered.
- Alternatives for networks, telephone, and distributions systems are available and may be considered. These include fiber optics and ISDN-Integrated Services Digital Network.
- Computerized electronic access systems for school-wide communications allow simultaneous transmission of audio,

video, voice, computer-generated, and/or satellite signals to classrooms from different access points throughout the school.

- School intercom speakers should be equipped with independent volume controls.

COMMUNICATIONS

- Conveniently located outlets for communications equipment should be planned throughout the facility.
- WANs (wide area networks; networks beyond the school) offer opportunities to communicate and access information beyond the school walls.

PLUMBING

- Warm and cold water for sinks should be available within the media center.
- Soap and paper towel dispensers are necessary at each sink.
- A restroom for staff is desirable, and public restrooms need to be accessible if the facility is used after hours.

Safety

Many safety issues are addressed by building codes; however, there are additional considerations that should be addressed when writing educational specifications or when selecting furnishings and equipment to ensure maximum safety and accessibility for all users of the facility.

- Electrical outlets, especially floor outlets, should be adequately protected.
- Avoid pits and story wells because they are inflexible, hazardous, limit the ability to move equipment, and limit accessibility for physically impaired users.
- Avoid furnishings and design features that can causing tripping.
- Avoid furniture arrangements that may inhibit traffic patterns and be potentially hazardous.
- Make sure that edges for furnishings, built-ins, and other storage pieces are smooth and rounded.
- Plan for the appropriate management/bundling of electrical cords for computer and audiovisual equipment—trays, fasteners to table edges, conduits, etc.
- Provide safety straps for equipment on rolling carts.

Security

The goal of any approach to security should be to increase the availability and access to resources for all users; therefore, attention to security as a preventive measure will eliminate the prospect of a restrictive environment. Some security features can be built into the structure if they are recognized in advance. A few are listed here:

- Limit the number of entrances/exits.
- Plan for adequate visual control throughout the facility.
- Request appropriate locks for doors and windows.
- Consider security system devices, where warranted.
- Think about appropriate locking storage units for some media but avoid them, if possible, because they restrict access.
- Locate the circulation area near the entrance.
- Consider providing an outside "drop" for return of materials.

SPACE CONSIDERATIONS

Media and technology facilities should include a variety of spaces which are conducive to the implementation of all program activities. Although it is advantageous to identify areas or rooms for very specific activities, the facility design should promote dual and/or overlapping uses. Special attention to the interrelationships of the spaces is essential to ensure efficiency and convenience for users and staff.

Space Requirements

Although the intent is to construct new facilities from the inside out, the realities of fiscal constraints often limit the freedom to provide all the square footage that is ideal for each function. The following are basic suggestions for space requirements; however, factors influencing the allocation of floor space include:

- Class size
- Number of classes/groups to be served at the same time
- Size of media and technology staff
- Age/size of users
- Extent to which provisions for disabled users are required—housing special programs for physically impaired students requires additional space
- Degree to which spaces can serve multiple uses at different times

LIBRARY MEDIA CENTER

The library media center itself incorporates a variety of spaces under the direction and supervision of the library media staff. Increasing emphasis on resource-based teaching methods, the expanded scope of library media services, and the increasing use of technology indicate that commitment to maximum square footage allowances will improve chances for future adaptability.

ELEMENTARY 1200 sq. ft. (support) + 4-6 sq. ft. per student (main use);
minimum 2800 sq. ft.*
MIDDLE 1800 sq. ft. (support) + 4-6 sq. ft. per student (main use);
minimum 3400 sq. ft.*
HIGH 2000 sq. ft. (support) + 4-6 sq. ft. per student (main use);
minimum 3600 sq. ft.*

* Minimum square footage is for student populations of 400 or fewer. Schools with enrollments below 400 must offer the same scope and variety of resources as schools with 400 students, thus indicating the need for similar space requirements. These square footage allowances define and describe minimum facilities to support the Basic Education Program (NCDPI, 1991, pp.14-17).

COMPUTER LAB

The computer lab provides opportunities for whole-class instruction and activities as well as independent use. A computer lab must be large enough to include student stations, a teacher station, work areas, and storage space; therefore, the minimum space required is 1,000 square feet (NCDPI, 1991, pp. 14-17). Optimally, 40 square feet should be allowed per work station, resulting in the minimum space required to accommodate one thirty-student class—1200 square feet (See **Computer Facility Planning Guide** in the Facilities section of the Appendix).

MULTIPURPOSE ROOM

A multipurpose room is a peripheral space that extends classroom and media and technology program opportunities for accommodating large groups. Regardless of the age of students, the room must be large enough to accommodate 50-60 people seated comfortably in chairs; therefore, the minimum space required is 1,000 sq. ft.

PRODUCTION FACILITIES

Various production facilities may be located throughout the building with specific functions serving the adjacent areas. The production facilities described in the following **Spatial Descriptions** section are intended to support the media and technology program as it serves the school.

PROFESSIONAL AREA

In some schools it may be advantageous to merge the school staff lounge area with the professional resources area. If so, the space allotment described in the following **Spatial Descriptions** section should be expanded. In addition, a further qualifier in the spatial relationships should be that the space is directly accessible to a hallway.

Spatial Descriptions

Media and technology facilities can incude a variety of areas or rooms such as these described below. In selecting the areas, it is important that justification for each space be related to the program objectives that will be advanced by including these areas in the facility design.

ADMINISTRATION AND PLANNING

Administration and Planning

ACTIVITIES

Administrative tasks, consultation, program planning, management functions, visual control of other areas.

SIZE

Minimum 200 sq. ft.,
add 50 sq. ft. for each
additional staff person

SPATIAL RELATIONSHIPS

Easily accessibly to circulation, reference, workroom

FURNITURE/EQUIPMENT

Storage for files, books, supplies, locked storage for coats and personal items. Desks, tables, chairs, computer and peripherals (printer, modem, scanner, CD-ROM player,etc.) for administrative uses, typewriter, telephone, computer and peripherals (printer, CD-ROM player, etc.) for file server for library automation, FAX machine, pencil sharpener, trash can

CATALOG

Catalog

ACTIVITIES

Searching the index to the resource collection, printing bibliographies

SIZE

Varies with furniture and equipment needed to support the collection and serve the population

SPATIAL RELATIONSHIPS

Easily accessible from reference, stack areas, main entrance

FURNITURE/EQUIPMENT

Card catalog, computers, printers, tables or counters, trash can

For print catalog:

$$\frac{\text{total number of resources} \times 5}{1000} = \text{number of catalog drawers}$$

For automated catalog:

Minimum of 2 computer stations with printer and printer stand for management of pin-fed paper (furniture that requires standing to access the catalog may encourage faster use of the electronic catalog) At least 1 station should be handicapped-accessible.

CIRCULATION

Circulation

ACTIVITIES

Checking out and returning materials, processing overdues, general inquiries, visual supervision of facility

SIZE

Varies, but should be limited to bare minimum needed for activities

SPATIAL RELATIONSHIPS

Easily accessible to administrative area, workroom, catalog

FURNITURE/EQUIPMENT

Work surfaces at appropriate height for students, seating for 1 or 2 workers, computer/printer/bar wand, rolodex files or other system for management of student ID numbers, storage for personal items of student workers, supplies, card files, security device, school intercom, clock, pencil sharpener, trash can and telephone

COMPUTER LAB

Computer Lab

ACTIVITIES

Word processing, data management, desktop publishing, telecomputing, computer-assisted instruction

SIZE

Minimum of 1000 sq. ft.; suggested 40 sq. ft. per workstation—1200 sq. ft. for class of 30 students; additional space needed for instruction and storage

SPATIAL RELATIONSHIPS

Accessible to classrooms and media center. If managed by media coordinator, direct physical and visual access from media center is necessary.

FURNITURE/EQUIPMENT

Computers, printers, video-based peripherals (video disc player, CD-ROM drive), modems, overhead projector, screen, LCD panel, access to networks, telephone, phone lines, marker board, tables or counters, chairs, storage units for software and supplies, bookshelves, files, pencil sharpener, trash can (See **Computer Facility Planning Guide** in the Facilities section of the Appendix.)

CONFERENCE/ SMALL GROUP ACTIVITY

Conference/Small Group Activity

ACTIVITIES

Consultations; meetings; small group reference and study; independent study, listening, viewing, and computing

SIZE

Minimum 150 sq. ft.

SPATIAL RELATIONSHIPS

Accessible with visual control from reference area

FURNITURE/EQUIPMENT

Table, chairs, screen, marker board

Darkroom

DARKROOM

ACTIVITIES

Developing, enlarging, printing, drying negatives and prints, mounting slides

SIZE

Minimum 150 sq. ft.

SPATIAL RELATIONSHIPS

Accessible from workroom and production area

FURNITURE/EQUIPMENT

Baseboard cabinets with countertops, 4' wide shallow sink with warm and cold water, light-secure door, safe light, timers, plastic trays, enlarger, magnifier, paper cutter, plastic chemical containers, liquid thermometers, funnels, tongs, developing cans, stools, trash can

Display and Exhibit

DISPLAY AND EXHIBIT

ACTIVITIES

Show projects or artifacts, display information

SIZE

Varies

SPATIAL RELATIONSHIPS

Varies according to purpose

FURNITURE/EQUIPMENT

Display cases, shelves, bulletin boards, tables

Distance Learning (DLS)

DISTANCE LEARNING (DLS)

ACTIVITIES

Viewing and participating in satellite delivered programs; participating in interactive (2-way audio, 1-way video) television via satellite; printing DLS-delivered materials; videotaping; producing programs for satellite uplink; performing experiments, completing classwork, taking exams, or participating in other activities associated with the DLS classes

SIZE

Varies with program and number of users at the same time; minimum—150 sq. ft. to accommodate 6-8 people; ideally—classroom size

SPATIAL RELATIONSHIPS

Varies with program requirements and responsibility for supervision; ideally connected to the media center for flexible use of DLS equipment

FURNITURE/EQUIPMENT

Tables and chairs and/or desks; various audiovisual and computer equipment including TV monitors, VCR, printer; telephone; at least one standard business line; satellite head-end; marker board; connection to other school-wide networks

EQUIPMENT STORAGE/ DISTRIBUTION/ MAINTENANCE

Equipment Storage/Distribution/Maintenance

ACTIVITIES

Security and storage for back-up and specialized equipment, maintenance and circulation of equipment. Current DLS audiovisual unit requires access to 110V outlet to maintain power supply.

SIZE

Minimum 175 sq. ft., size varies with amount of storage needed

FURNITURE/EQUIPMENT

Shelving, storage bins, files, countertop or worktable, chair, cabinet, drawers, pencil sharpener, trash can

SPATIAL RELATIONSHIPS

Direct access to outside hallway, access to workroom

INDEPENDENT WORK AREAS

Independent Work Areas

ACTIVITIES

Listening, viewing, computing, telecomputing, studying, reading

SIZE

Varies

SPATIAL RELATIONSHIPS

May be merged with other areas such as reference or conference

FURNITURE/EQUIPMENT

Tables or carrels for independent work, chairs, various audiovisual equipment, computer/printer/modem stations, storage for software, trash can

INFORMAL READING

Informal Reading

ACTIVITIES

Reading, browsing

SIZE

Varies

SPATIAL RELATIONSHIPS

Away from quiet, study areas

FURNITURE/EQUIPMENT

Comfortable/informal seating, tables that complement seating arrangement, magazine and newspaper display unit/ shelving, trash can

Large Group Instruction

LARGE GROUP INSTRUCTION

ACTIVITIES

Whole class instruction, study, reference, viewing, listening, reading, browsing, staff development programs, meetings, presentations

SIZE

Large enough to accommodate the largest class. **(for each 3' x 5' table and 4-6 chairs: 143 sq. ft.)** Additional space for teaching station that will accommodate use of audiovisual and computer-related equipment

FURNITURE/EQUIPMENT

Tables and chairs, marker board, various audiovisual and computer-related equipment, screen, pencil sharpener, trash can

SPATIAL RELATIONSHIPS

Near reference area, book stacks

Multipurpose Room

MULTIPURPOSE ROOM

ACTIVITIES

Presentations, performances, group instruction or activities, viewing, computing, telecomputing, meetings, video production, teleconferencing, distance learning

SIZE

Enough space for two classes; minimum 1,000 sq. ft

SPATIAL RELATIONSHIPS

Location is flexible depending on justification; generally: adjacent to media center, but may or may not have direct access, depending on intended purpose for the space and responsibility for supervision; ideally adjacent to equipment storage area

FURNITURE/EQUIPMENT

Folding tables, stackable chairs; curved curtain/backdrop for video production; large screen; marker board; bulletin board; shelves and cabinet storage for furniture, resources, and equipment; audiovisual and computer-related equipment; telephone conferencing equipment; distance learning and television equipment; pencil sharpener; trash can

Periodical Storage

PERIODICAL STORAGE

ACTIVITIES

Storage, management, and retrieval of back issues of magazines and newspapers

SIZE

Varies with size of school and grade levels; 150-250 sq. ft.

SPATIAL RELATIONSHIPS

Accessible to reference area, copy machine, workroom, circulation, periodical indexes, and independent work areas that have reader/printers for microforms

FURNITURE/EQUIPMENT

Adjustable shelving; magazine files; microform storage units; kick step stool; table, counter, or other furniture for periodical and microform return

PRODUCTION

Production

ACTIVITIES

Making transparencies, books, book jackets, filmstrips, videotapes, audiotapes, computer graphics, graphics, posters, signs, bulletin board materials, slides, photographs, enlargements of pictures or maps; transmitting live audio and video to classrooms; duplicating; laminating; dry mounting

SIZE

Varies with intended uses; 400-600 sq. ft.

SPATIAL RELATIONSHIPS

Adjacent to or incorporated in workroom, accessible from administrative area; audio/video production area can be a portion of larger production space

FURNITURE/EQUIPMENT

Water- and stain-resistant tables and countertops, sink with warm and cold water, seating, storage units, drawers, cabinets, legal-sized filing cabinets, flat files for oversized flat storage, thermofax machine, bookbinding equipment, video camera/recorder, curtain or backdrop, tripod, dolly, video editing equipment, video graphics generating equipment, tape recorder with sync, slide projector, record player, sound mixer, microphones, computer and peripherals, laserdisc player, CD-ROM drive, LCD panel, still camera with tripod, camera copy stand, lettering devices, light table or screen, copy machine, laminator, dry mount press, tacking iron, overhead projector, opaque projector

PROFESSIONAL AREA

Professional Area

ACTIVITIES

Storing professional materials, planning, previewing instructional materials, doing paperwork, computing, typing, relaxing

SIZE

Varies, minimum 150 sq. ft., allow 60 sq.ft. per person expected to use the space at one time

SPATIAL RELATIONSHIPS

Accessible to workroom/production areas

FURNITURE/EQUIPMENT

Table and chairs, leisure furniture, storage cabinets with cabinet space, sink, small refrigerator, various audiovisual equipment, computer and peripherals, telephone, typewriter, shelving, pencil sharpener, trash can

Reference

ACTIVITIES

Reading, studying, finding information in various formats, telecomputing, accessing electronic and print indexes, accessing microforms, accessing back issues of periodicals, printing information, word processing, listening, viewing, photocopying

SIZE

Varies with student population, grade levels, and size of collection

SPATIAL RELATIONSHIPS

Accessible from administrative and circulation areas; ideally located near main entrance

FURNITURE/EQUIPMENT

Tables, chairs, shelves, filing cabinets, carrels or individual work stations, specialized storage for some resource formats, copy machine, computers with peripherals, modems, telephone lines, printers, CD-ROM drives, laser disk players, filmstrip and slide previewers, cassette players, record players, microform reader/printers, atlas stand, dictionary stand, index tables, pencil sharpener, trash can

STORY SHARING

Story Sharing

ACTIVITIES

Elementary: Storytelling, individual reading, reading/presenting to groups, puppetry, teaching, role playing or acting, listening, viewing, housing Easy/picture books

Middle and High School: booktalking to groups, meetings of book discussion groups, informal reading (Refer to **Informal Reading** section)

SIZE

Elementary: open floor space for seating a class of 30, approx. 6-9+ sq. ft. of open space per student—approx. 180-270+ sq. ft.

Middle and High School: informal reading space is used for this purpose

SPATIAL RELATIONSHIPS

Elementary: away from heavy traffic flow, near Easy/picture books

Middle and High School: (Refer to **Informal Reading** Section)

FURNITURE/EQUIPMENT

Elementary: divided shelving for Easy/picture books; rocking chair; stool; floor cushions; extra padding under carpet; various audiovisual and computer equipment on rolling carts; screen; portable or permanently-mounted marker board; portable puppet theater, easel, and flannel board

Middle and High School: informal furniture

Workroom

ACTIVITIES

Selecting, ordering, receiving, mending, and processing media resources; photocopying; producing instructional materials; storing supplies; laminating; typing; computing; telecomputing; managing local- and wide-area networks; distributing satellite, cable, antenna, network, and other input signals to other areas of the school

SIZE

Varies with activities; approx. 400-600 sq. ft

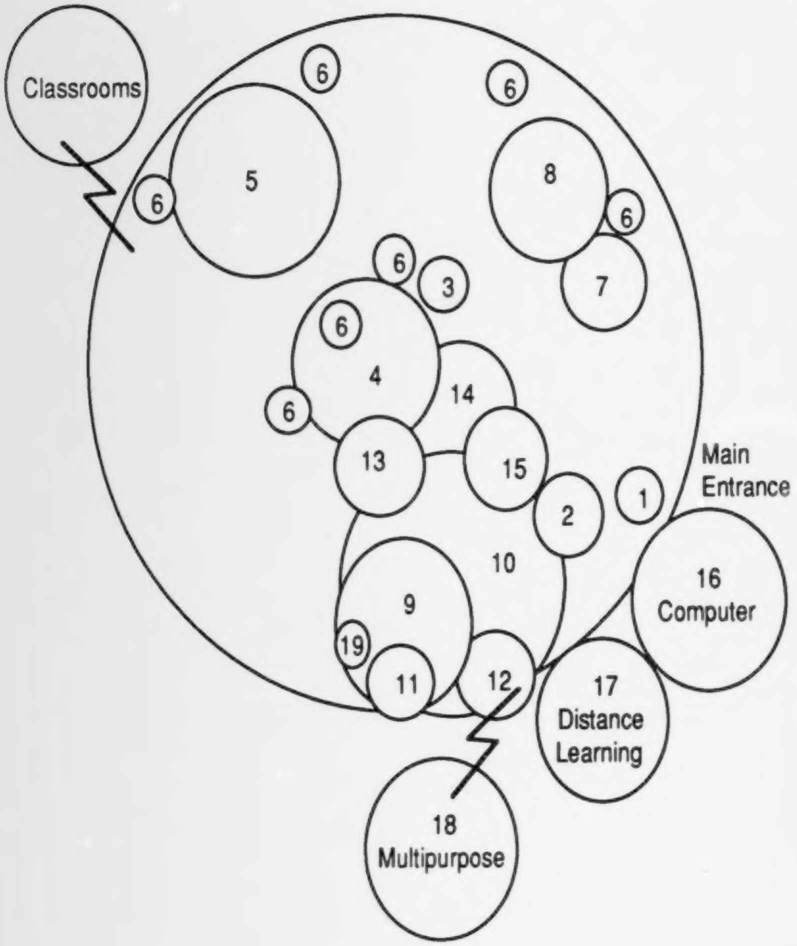
SPATIAL RELATIONSHIPS

Accessible to administration, equipment storage, and overlapping with production and professional areas; visual access to instructional areas

FURNITURE/EQUIPMENT

Cabinets with countertops, sink with warm and cold water, tables and chairs, stools, telephone, fax machine, computers and peripherals, typewriter, TV monitors, VCRs, head-end distribution box, laminator, paper cutter, copy machine, thermofax machine, filing cabinets, clock, intercom, pencil sharpener, trash can

Spatial Relationships for Media & Technology Facilities


Classrooms
6
6
5
6
8
6
7
6
3
6
4
14
6
13
15
Main Entrance
2
1
10
16 Computer
9
19
11
12
17 Distance Learning
18 Multipurpose

1. Circulation
2. Administration
3. Catalog
4. Reference
5. Large group instruction
6. Independent work areas
7. Informal reading
8. Story sharing
9. Production area
10. Workroom
11. Audio/video production area
12. Equipment storage/ distribution/maintenance room
13. Periodical storage
14. Conference/small group activity
15. Professional area
16. Computer lab
17. Distance learning (DLS)
18. Multipurpose room
19. Darkroom or audio booth

FURNITURE & STORAGE CONSIDERATIONS

Furnishings are selected and arranged for efficient use and housing of all types of media. The media coordinator can best determine the quantity of furnishing/shelving to purchase by calculating the housing requirements for the facility's collection, as well as the workspace requirements. A scaled furniture layout is also useful in determining furnishing/shelving needs. The following are general considerations when planning for storage and furniture needs:

- All furniture should be sturdy, safe, durable, and attractive.
- Dimensions should be scaled to physical differences and special needs of users.
- Furniture requirements should be accurately calculated to meet program needs without over-estimating furniture needs.
- Changing resources and services may alter furniture requirements (i.e., literature-based reading programs influence shelving demands).
- Flexibility in use and arrangement of furnishings should be a priority.
- Purchasing options for furniture and built-ins should be investigated.
- Placement of furniture should adhere to fire codes and other safety requirements.

Shelving

- Sturdy with adjustable shelves
- Wood, wood laminate, or steel
- Single-faced for perimeter, double-faced for free-standing
- Divided shelving for elementary schools, especially for Easy/ picture books; dividers 5" high, spaced 7"-8" apart
- Divided shelving for disk recordings and laser discs; dividers 6" high, spaced 3" apart
- Width of shelves determined by the size of materials to be stored on shelves
- Quantities determined by size of collection and anticipated growth of collection; calculate linear feet of shelving needed for educational specifications
- Nine-foot ranges for free-standing shelves increase flexibility for arrangements

CAPACITY ESTIMATES AND SHELF SPECIFICATIONS

Type of Shelving	Capacity per 3' shelf	Depth	Shelf Dividers
Standard books	30	10"-12"	
Reference books	18-20	12"	
Easy/Picture books**	40-50	12"	5" high—7"-8" apart
Periodicals*	3-4	16" slanting	
Disc recordings*	60-70	16"	6" high—3" apart
Sound filmstrip sets	15-18	16"	
Computer software*	10-25	16"	5"high—7"-8" apart
VHS videocassettes*	25	12"-16"	
CD-ROM disks*	10-25	16"	5"high—7"-8" apart
Laser disks*	60-70	16"	6"high—3" apart

Although some items can be stored on more narrow shelving than indicated, it is highly advisable to limit the number of shelf widths to be purchased in order to maximize flexibility.

* *Specialized storage units may be used in lieu of standard shelving.*

***This type shelving is highly recommended for all of the general book collection for elementary schools.*

SHELVING CALCULATIONS

Linear Feet

$$\frac{\text{Number of items to be stored}}{\text{Number of items per 3' shelf}} = \text{Number of shelves } \times 3' = \text{Linear feet of storage}$$

Number of Ranges

$$\frac{\text{Linear feet of storage}}{\text{Number of shelves high per 3' section}} = \text{Number of ranges}$$

Number of Shelves

42" high = 2 or 3 shelves
48" high = 3 shelves
5' high = 4 shelves
5'6" or 6' high = 5 shelves
7' high = 6 shelves

Tables and Carrels

- Standard 3' x 5' tables seat 4 comfortably with sufficient work space.
- Trapezoidal tables lend themselves to flexible groupings.
- Standard 4' round tables provide less work space than rectangles, for similar floor space.
- Work space heights vary with activities (reading, writing, viewing, computing) and size of users.
- Computer tables should allow 36"-40" wide working surface with minimum of 30" wide clearance under the table.
- Carrels should be equipped with electrical outlets for maximum flexibility.
- Carrels may have different specifications depending on use.
- Standard audiovisual work stations and independent study stations may require an additional light source and a shelf for books, materials, and software.
- Computer workstations are wider than standard carrels and have lower work surface for comfortable keyboarding; a shelf is optional.
- Group carrels are an efficient use of space and define specific independent activity spaces: listening/viewing/computing.

Chairs and Other Seating

- Sled-type chairs for carpeted floors
- Padded seating whenever possible
- Seating scaled for users at appropriate height to encourage good posture; knees should be at 90 degrees and feet resting on the floor
- Seating scaled for appropriate relationship to work surfaces
- Curved backs to chairs
- Rolling, upholstered chairs for professional staff with pneumatic and mechanical adjustment devices
- Vinyl-covered floor cushions for informal reading area in primary grades
- Upholstered, informal seating with backs for all grade levels scaled to users (sofas, love seats, individual chairs)

Maximum Heights for Furniture	Elementary	Middle	High
Perimeter Shelving	5'-5'6"	5'6"	7'
Freestanding Shelving	48"	48"	48"
Tables and Carrels	25"-28"	26"-30"	29"-30"
Chairs/Other Seating	14"-17"	16"-18"	18"

Wheelchairs require a minimum height of 28" between floor and bottom of table or carrel.

Equipment Storage

- Shelves can be metal, wood, or wood laminate; adjustable or fixed; built-ins or moveable.
- Shelves should be sturdy enough to hold heavy pieces without bending.
- If built-in with fixed shelves, create bins—3' wide x 2' high x 2' deep (consider customizing distance between shelves to fit different pieces of equipment).
- Rolling carts can be used for some storage.
- All equipment should be protected from dust.

Built-Ins

Because built-in units lack flexibility, it is exceedingly important that they be designed for the intended functions and checked throughout the blueprint review process. Built-in storage units are generally included in the standard contract and are usually more cost efficient than adding storage units after construction. Consider the following:

- Refrain from adding built-ins to areas that require flexibility.
- Equipment storage room, workroom, computer lab and production facilities are likely spaces for built-ins.
- All built-ins should be sturdy, durable, scratch and stain resistant.
- Use the same requirements for heights as with other furniture.

Other Furniture

ATLAS STAND

Atlas Stand: Middle and High School: 30" wide x 27" deep x 44" high with slanted top; Elementary: Maximum height 40"

CATALOG

Catalog, Print: Below eye level of average user, purchased in add-on units from library furniture company
Range type catalog: Elementary—36"-40" high
Middle—36"-48" high
Range or Upright: High School—40"-54" high

Catalog, Automated: Work surfaces to accommodate standing, seated, and wheelchair access; built-in units, tables, carrels or counters with adequate space for computer, peripherals, printer, and paper; management for power cords and connecting cables; minimum of 2 workstations

CIRCULATION DESK

Circulation Desk: Limit furniture to absolute necessities; scale surface height to size of users; if not currently automated, allow for future automation with furniture that will accommodate a computer and peripherals, CD-ROM drive, bar wand, and printer

DICTIONARY STAND

Dictionary Stand: Middle and High School: 22" wide x 16" deep x 44" high with slanted top;
Elementary: revolving table-top design with slanted surface

FILING CABINETS

Filing Cabinets: For administration: legal sized, vertical or lateral, with or without hanging files

FLAT FILES

Flat Files: For storing oversized print materials such as art prints, bulletin board materials, and posters—40" x 30" x 3"-5" deep

INFORMATION FILE

Information File: Legal sized filing cabinets with hanging folders, either vertical or lateral; open, hanging lateral files may also be used

SPECIALIZED ALTERNATIVES TO SHELVING

Specialized Alternatives to Shelving: Check library supply catalogs and furniture manufacturers for customized shelving for items such as:

- Audiocassette recordings
- Compact disks
- Computer diskettes
- Disc recordings
- Films
- Laser discs
- Microforms
- Paperback books
- Periodicals
- Slides
- Videocassettes

ASSESSING YOUR PROGRAM

What is the status of this component of your media and technology program? By answering the following questions, you can begin to collect the information you need for the implementation of a local planning and assessment model. For further information about the process, refer to the **Planning and Assessment** chapter.

FACILITIES

1. **Are media and technology professionals involved in planning for new and/or renovated facilities?**
2. **Does the school system require that educational specifications be written for new and/or renovated facilities?**
3. **Does the school system permit and encourage the involvement of professional staff throughout the design and construction phases?**
4. **Do media and technology facilities reflect design considerations, i.e., location for accessibility and expanded use, consideration for disabled users, aesthetics/atmosphere?**
5. **Is sufficient attention paid to mechanics/engineering features of media and technology facilities so that there is adequate electrical and plumbing service?**
6. **Are media and technology facilities spacious enough to encourage use by a variety of groups, simultaneously?**
7. **Are spatial relationships appropriate?**
8. **Do the facilities include a variety of spaces that enable students to read, listen, view, and produce media with ease?**
9. **Are the support areas sufficient for the different functions required of the program?**
10. **Are furnishings the appropriate size for students served?**
11. **Is visual supervision of the entire facility possible?**
12. **Is there sufficient shelving and storage space to house all media and equipment for easy access?**

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Personnel

INTRODUCTION

***Qualified** media and technology personnel are fundamental to strong media and technology programs in the schools. An effective library media program, directed by a qualified school media coordinator, is **basic** to every school's instructional program. Additionally, the advent of newer technologies in this "information age" has generated the need for more and different types of personnel who possess a range of specialized skills.*

Currently, school systems are employing computer teachers, technology specialists, technicians with special expertise, and other media and technology specialists to extend the services once provided by a school librarian, alone. As specialized professionals have been identified, so have the criteria by which they become qualified to work in the schools of North Carolina.

Certification is the formal method for becoming qualified for professional positions in North Carolina schools. It is a licensing process which establishes eligibility for individuals to perform specific professional services as a public school employee. Professional school personnel in North Carolina receive initial certification through one of five procedures—Approved Program; Reciprocity; Lateral Entry; Direct Certification; or Endorsement. [Detailed information about certification can be found in the *Certification Manual* (1989), published by the North Carolina Department of Public Instruction. Every LEA personnel office should have a copy.]

This chapter provides national, regional, and state guidelines for staffing; identifies certified positions in media and technology; and suggests specialized positions that do require certification. In addition, it offers guidelines for using volunteers in the media program, strategies for program evaluation, and references for further reading.

> *"There seems to be a threshold at which the library media program begins to pay the kinds of dividends expected from the investment made in it. This threshold is a staff consisting of a full-time professional and a full-time clerical person. This finding was not only statistically significant but was the single most important variable in an excellent library media program."*
>
> Loertscher, Ho, & Bowie, 1987, p. 152

STAFFING GUIDELINES

Staffing patterns at both the building and system level are dependent upon a number of factors:

- Size of the school
- School organization
- General staffing of the school
- Facilities
- Services provided at the system level
- The curriculum
- Expectations of the faculty and students
- Special student populations
- Provisions to integrate media and technology programs into the curriculum
- Relationship of student learning activities to media and technology resources and services

Staffing guidelines or standards are available at the national, regional, and state levels to help administrators make informed decisions about staffing levels and patterns.

National Guidelines

Information Power (1988, p. 57) presents the following guidelines for staffing:

1. All students, teachers, and administrators in each school building at all grade levels must have access to a library media program provided by one or more certificated library media specialists working full-time in the school's library media center.

2. Both professional and support staff are necessary for all library media progams at all grade levels. Each school must employ at least one full-time technical assistant or clerk for each library media coordinator. Some programs, facilities, and levels of service will require more than one support staff member for each professional.

3. More than one library media professional is required in many schools. The specific number of additional professional staff is determined by the school's size, number of students and teachers, facilities, specific library media program compo-

nents, and other features of the school's instructional program. A reasonable ratio of professional staff to teacher and student populations is required in order to provide for the levels of service and library media program development described in this document.

Regional Standards

The Southern Association of Colleges and Schools (SACS) is the regional accrediting agency for North Carolina. Individual schools and school systems *voluntarily* seek accreditation; however, schools/systems seeking accreditation agree to abide by all stated policies and standards specified by SACS. [For further information about SACS, write: Southern Association of Colleges and Schools, (Commission on Elementary Schools *or* Commission on Secondary Schools), 1866 Southern Lane, Decatur, Georgia 30033-4097, Telephone (404) 329-6500 or 1-800-248-7701.]

Southern Association of Colleges and Schools
Commission on ELEMENTARY SCHOOLS (1990)

Membership	Librarian or Media Coordinator	Clerical Assistant*
1-263	1/2	
264-439	1	
440-659	1	1/2
660 or more	1	1

* Professional personnel may be used in lieu of library aide or clerical assistant.

Southern Association of Colleges and Schools
Commission on SECONDARY SCHOOLS (1986)

Membership	Librarian or Media Coordinator	Clerical Assistant
1-299	1/2	Secretaries or clerks are required (by school membership) and assigned at the discretion of the principal—none specified for media program.
300-499	1	
500-649	1	
650-749	1	
750-999	1	
1,000-1,249	2	

State Guidelines

North Carolina's guidelines for staffing are based on the *Basic Education Program* (BEP) when it is fully funded. Three types of media and technology personnel included in the staffing section of the BEP are:

- Media Coordinators
- Math, Science, and Computer Teachers
- Instructional, Lab, Media, or Clerical Assistants

Media coordinators are allotted *to the school system* on the basis of one position for every 400 students in average daily membership (ADM), systemwide. System-level administrators have the flexibility to place media professionals in the schools, based on their program needs, as well as enrollment.

NC Basic Education Program
Staffing Guidelines

School Enrollment	Media Coordinator	Media Assistant(s)
up to 400	1	1/2
401-799	1	1
800-1199	2	1
1200-1599	2	2*
1600-1999	3	2*
2000-2499	3	3*

* School systems providing centralized processing may choose to assign one or more support staff to that service area. At least one media assistant is recommended in schools of this size, even when centralized processing is provided.

The BEP also provides a special allotment of 100 math, science, and computer teachers. These positions have been fully funded, with one ten-month teacher position distributed to each county system in the yearly instructional personnel and support services category. If more than one school system exists in a given geographical county, then the administrators of those school systems have the flexibility to allot proportional shares of the one position to their respective school systems. The position may be used in one of the three content areas or in a combination of the three. The individual in this position often serves as a resource teacher located at the school system's central office to work with teachers, to conduct model teaching activities, and to coordinate an overall program or series of activities. School systems provide the Department of Public Instruction with a list of duties of the teacher in this position. They are required to report any changes in the allotment or use of the position at the beginning of each school year.

In the fully-funded BEP, media assistants are included in the instructional, lab, media or clerical assistants allocation which is computed on a ratio of one position for every 285 students in ADM. For example, if one-third of these positions were assigned to the library media program, a media assistant would be allotted for every 850 students in ADM. This media assistant position is highly recommended for tasks such as processing and circulating resources, even in very small schools, where there may be only a half-time professional.

SCHOOLS WITH MORE THAN ONE MEDIA PROFESSIONAL: DIVISION OF DUTIES

When schools employ two or more media professionals, duties and responsibilities should be delineated in order to ensure effective service, efficient time management, and to avoid duplication of effort.

As soon as two professionals are employed, one may be designated chair of the program. The appointment of a chair establishes a contact person for communicating information. The role is similar to a department chairperson. This responsibility may be rotated.

In order for each professional to be effective in the performance of duties, clear cut areas of responsibility should be defined and methods of resolving conflicts determined. The principal, media director and media coordinators should determine assignments—giving equal balance in the division of responsibilities and taking advantage of the expertise and interests of each person. Clearly defined job descriptions can be developed once duties and responsibilities are established.

By necessity, the two media coordinators must function as a team and should have knowledge and information about all areas of the school library media program. Daily communication among the two professionals and the media assistant is essential for an exemplary school library media program.

MEDIA AND TECHNOLOGY PROFESSIONALS

The number and types of media and technology professionals employed in each school system are determined by the size and organizational structure of the system, as well as by the ability of the school system to include a variety of personnel in the available budget. Professional media and technology positions that require certification in North Carolina are listed below. Not every LEA will have persons employed in every position. (The certificate area codes and typical assignment location within a school system are given.) Qualifications for these positions vary. Certification requirements set the qualifications for each.

NC Certificated Media and Technology Position

Position	Code	Location
• Media Coordinator	(076)	building-level
• Computer Teacher/Coordinator	(079)	building- or system-level
• Instructional Technology Specialist--Telecommunications	(074)	building- or system-level
• Media Director/Supervisor	(078)	system-level
• Instructional Technology Specialist--Computer	(077)	system-level

Local districts may be interested in reviewing Level I Computer Competencies for all certified personnel approved by the State Board of Education in June 1985. These competencies were included in the opportunity standards of the North Carolina accreditation process. They may be helpful to local districts interested in assessing or improving their instructional programs.

Preparation programs for the media coordinator develop those competencies deemed essential for the beginning media coordinator. This stage is the primary responsibility of the preparing university, working cooperatively with school systems in which field experiences are provided. It culminates in eligibility for the 076 (media coordinator) certificate which requires a master's degree from an approved program.

Media Coordinator (076)

In North Carolina, the school's media coordinator may be identified by a variety of titles, such as librarian, library teacher, or media specialist. The official title for certification purposes is media coordinator, the term used throughout *Learning Connections*. Those benefits that are unique to teachers in North Carolina—20 days extended sick leave, personal leave, tenure—are applicable to the media coordinator as well.

CERTIFICATION

Approved program requirements that must be met to qualify for K-12 Media Coordinator certification are at the master's degree level. Approved programs are designed by colleges and universities based on State Board of Education (SBE) standards, guidelines, and competencies, and require approval by the SBE. (For current information about approved programs, contact the Teacher Education Section of the Office of Personnel Services, NC Department of Public Instruction, Raleigh, NC.)

A person holding the old certification as an Associate Media Coordinator (075) may be employed as a media coordinator and is not required to obtain a master's degree. However, this certification is no longer issued.

Where qualified candidates are unavailable, local school superintendents have alternatives such as requesting provisional certification or lateral entry.

ROLE

The school media coordinator has the primary responsibility for leadership and implementation of a school library media program that serves as an integral part of the instructional process. To accomplish this, the media coordinator:

- Develops plans to ensure effective instruction and management of media programs
- Is an effective teacher
- Provides a variety of services to extend and reinforce the instructional program of the school
- Promotes positive relationships with students, staff, and community
- Effectively coordinates the evaluation and selection of instructional resources
- Is an effective manager
- Displays evidence of professional ethics, growth, and development

Personal effectiveness skills combined with professional knowledge and expertise are necessary for successful interaction with students, teachers, administrators, and other patrons.

JOB DESCRIPTION

The JOB DESCRIPTION OF THE MEDIA COORDINATOR has been adopted by the State Board of Education (July, 1987) for use, statewide. This job description along with the Board adopted MEDIA COORDINATOR PERFORMANCE APPRAISAL INSTRUMENT is a part of the overall North Carolina Performance Appraisal System.

REPORTS TO: Principal

SUPERVISES: Coordinates and directs the activities of media assistants, student assistants, and/or volunteers.

PURPOSE: To provide the leadership and resources for implementation of a school media program that serves as an integral part of the instructional process.

DUTIES AND RESPONSIBILITIES:

1. MAJOR FUNCTION: Manages Instruction

   Adhering to the Teacher Performance Appraisal Instrument criteria, the media coordinator instructs students and faculty in using and/or producing media to integrate into the curriculum and facilitate the teaching/learning process.

2. MAJOR FUNCTION: Manages Public Relations

   The media coordinator initiates interaction with students, staff, administration, and the general public for purposes of integrating, promoting, and expanding the media program.

3. MAJOR FUNCTION: Plans for the Media Program

   The media coordinator designs and implements short- and long-range plans which allow a balance among integrated skills instruction, literature appreciation, planning with teachers, and collection management and development.

4. MAJOR FUNCTION: Manages Resources

   The media coordinator establishes and carries out procedures for effective and efficient selection, acquisition, cataloging, processing, accessing, and maintaining materials and equipment.

5. MAJOR FUNCTION: Manages the Facility

The media coordinator organizes the facility and resources in such a way that they reflect the philosophy and goals of the school and its media program.

6. MAJOR FUNCTION: Carries Out Professional Responsibilities

The media coordinator provides opportunities for personal and professional growth for him/herself as well as for the school's staff and students. S/he also carries out assigned non-instructional duties; adheres to established laws, policies, rules and regulations; and submits accurate reports promptly.

EVALUATION

The **Media Coordinator Performance Appraisal Instrument** was approved by the State Board of Education on July 16, 1987. A copy of this official evaluation instrument is in the **Personnel** section of the Appendix.

Special Endorsement in Computer Education (079)

Individuals holding this endorsement are often assigned as computer resource teachers for a school or school system, computer education teachers (elective course, state code 2501), special allotment computer teachers, or ten-month computer coordinators for a school system.

CERTIFICATION

An individual in a ten-month teacher position as a computer teacher, computer resource teacher, or as a computer coordinator needs the Special Endorsement in Computer Education (#18079, generally referred to as 079). The 079 endorsement allows the holder to serve in computer education full-time as well as part-time. Individuals may obtain this endorsement in one of two ways:

a. Hold a current North Carolina certificate in a teaching area and provide documentation for 18 semester hours of computer science and/or computer education courses which satisfy the established competencies

b. Hold a current North Carolina certificate in a teaching area and be recommended by the school system to receive a provisional endorsement while completing documentation for the competencies

Individuals seeking this endorsement need to contact the Division of Certification of the NC Department of Public Instruction. *Special note: This endorsement is necessary for any individual serving in a BEP special allotment position designated as full- or part-time computer education.*

ROLE: SCHOOL-LEVEL

A computer teacher or resource teacher in one school, or several schools, may be assigned one or more of the following roles:

- Teaches elective course(s) coded as computer education, 2501
- Serves as the lead teacher for computer activities for the school(s)
- Coordinates computer skills units with classroom teachers and media coordinators

This teacher may report to one of several individuals: school principal, media coordinator, subject area chair, or system-level computer or media supervisor.

ROLE: SYSTEM-LEVEL

An individual acting as a computer coordinator for the school system, but employed as a ten-month teacher, has the instructional responsibilities of a system-wide supervisor for computer education but only assists a supervisor with program development and budgeting. (See **Recommended Job Description for Computer Coordinator** in the Personnel section of the Appendix.)

This individual may be assigned one or more of the following types of roles:

- Develops and delivers staff development on student computer skills and Level I computer competencies for educators
- Designs and conducts model teaching lessons or units, for replication or follow-up by the classroom teacher or media professional
- Assists with long-range planning activities
- Serves as the lead person for special computer education activities involving students or staff
- Troubleshoots software and equipment problems

The (teacher) computer coordinator usually assists with systemwide purchasing decisions, works with other resource personnel or supervisors to integrate computer skills into the total school program, and serves as a clearinghouse for new applications and emerging technologies. This individual may report to an assistant superintendent, a director of instruction, or a media supervisor.

JOB DESCRIPTION

The job description for a computer teacher/coordinator will vary depending upon the responsibilities assigned by the local school system administrators.

EVALUATION

The assignment and responsibilities of the computer teacher/coordinator will determine the evaluation instrument to be used. Persons with primarily instructional responsibilities should be evaluated with the teacher performance evaluation instrument. Those whose duties are primarily coordinator should be evaluated with the coordinator instrument. Local districts may add functions to either instrument to reflect the full range of responsibilities.

Instructional Technology Specialist–Telecommunications (074)

CERTIFICATION

Certification is available to those persons who, through advanced study and preparation (graduate degree) and experience, have developed extensive knowledge and skill, and can provide specialized services in certain technical areas of media services. These services would include the design, development, and production of instructional materials in various formats (audio, video, electronic); in the selection, organization and operation of various types of telecommunications equipment; the programming, production and utilization of televised media (cable, open-air broadcast, satellite); and, the application of communications technology to the teaching/learning process.

ROLE

The Instructional Technology Specialist—Telecommunications may be identified by a variety of titles, such as Telecommunications Specialist, Director of Telecommunications, Media Director, and Coordinator of Technology Services. Individuals holding this certification are sometimes employed as the second or third professional in a school library media program. They offer breadth in expertise not possible with fewer professionals. The

Telecommunications Specialist serves as a member of the management team and is charged with responsibility for planning, implementing, and evaluating an educational program relevant to the needs of the student population in a school system or individual school.

The program for the preparation of the Telecommunications Specialist should be characterized by flexibility to allow for differences in the educational background and experiences of each candidate. Programs of study for all students have common elements, but the mix of these elements will vary for individual programs of study.

JOB DESCRIPTION

The job description for an Instructional Technology Specialist — Telecommunications will vary depending upon the responsibilities assigned by local school system administrators.

EVALUATION

The LEA administration has the flexibility to design or adapt a performance evaluation instrument for the Instructional Technology Specialist—Telecommunications to match the written job description.

Media Director/Supervisor (078)

The media director/supervisor is a system-level media professional who may be identified by one of several titles— Director of Library/Media Services, Director of Media and Technology, Coordinator of Library/Media Services, and Library Supervisor. Competencies are required in the areas of administration, supervision/management, and curriculum development for this certification area.

CERTIFICATION

Director/Supervisor (master's level) certification is required for service as director of media services in a school system. Certification is based on eligibility to hold the media coordinator (076) certificate plus 12 graduate semester hours of credit in administration, curriculum development, and supervision and three years of acceptable experience as a media coordinator.

ROLE

The media director/supervisor's primary concern is the improvement of learning opportunities through leadership in the implementation and administration of a strong, unified media program. The media supervisor has the role of decision maker, consultant, and specialist in advising administrators, teachers, and other professional personnel. Responsibilities include curriculum development, instruction, resource collection development, and staff development.

The media director/supervisor serves as a member of a management team charged with the responsibility for planning, implementing, and evaluating an educational program relevant to the needs of the student population in a school system. In theory, the supervisor holds a staff position and so provides support services to the program and the administrator who has line authority. Thus, the administrator has more official decision-making authority according to organizational theory. In practice, however, the supervisor and the administrator perform many common functions. Differences occur in the degree to which a competency area is practiced, the scope of decision making, and the authority associated with the two roles. Local boards of education designate position titles. For the person directing a full range of media services at the system-level, the JOB DESCRIPTION OF THE DIRECTOR is most applicable. This job description was adopted by the State Board of Education in July, 1983.

Preparation programs for the media director/supervisor develop those competencies deemed essential for the beginner in a supervisory role. This stage is the primary responsibility of the preparing university, working cooperatively with school systems in which field experiences are provided. It culminates in at least 12 graduate semester credits in administration, curriculum development, and supervision courses from an approved educational program beyond possession of or eligibility for the media coordinator (076) certificate; at least three years of successful experience as a media coordinator; and a master's degree granted by a university with an approved media program.

JOB DESCRIPTION

The State Board of Education adopted general job descriptions and performance appraisal instruments for system-level directors, coordinators, and supervisors. Local boards of education designate position titles. For the person directing a full range of media services at the system level, the JOB DESCRIPTION OF THE DIRECTOR is most applicable. This job description was adopted by the State Board of Education in July, 1983.

Director Job Description

REPORTS TO: Superintendent or Designee

SUPERVISES: Instructional and/or Support Personnel

PURPOSE: To provide leadership in the development, implementation and evaluation of a specific area for the benefit of the system's total educational program.

DUTIES AND RESPONSIBILITIES:

A. MAJOR FUNCTION: Program Management

The director provides effective leadership in developing comprehensive program plans and implementing and evaluating the planned programs.

B. MAJOR FUNCTION: Fiscal Management

The Director assists/prepares budgets, coordinates with other departments or agencies to assure maximum services, maintains records/reports/inventories in accordance with local/state/federal policies.

C. MAJOR FUNCTION: Information Management

The Director shares information about programs with various publics, serves as liaison between the school system and other agencies and assists in the development of inservice staff development. The Director accomplishes personal growth objectives and demonstrates professional ethics.

D. MAJOR FUNCTION: Personnel Management

The Director assists in selection and placement of personnel, delegates and supervises staff responsibilities, and assists in evaluating staff.

EVALUATION

For the person directing a full range of media services at the system level, the performance appraisal process for the director is most applicable. Local districts may add functions to reflect other locally determined responsibilities.

Instructional Technology Specialist–Computer (077)

The system-level computer professional may be identified as a school system computer coordinator, computer education supervisor, or computer technology director. Competencies are required in the areas of administration, supervision/management, curriculum development, and computer technology.

CERTIFICATION

An individual who serves as a school system computer coordinator, computer education supervisor, or computer technology director will need the instructional technology specialist-computer certification (077) if the position is a supervisor position rather than a teacher position. The instructional technology specialist-computer certification is a master's degree level program. An individual may obtain this certification in one of two ways:

a. Hold a current North Carolina certificate in a teaching area and a master's degree and complete the courses identified by a coordinator of an approved graduate program which offers the 077 certification
b. Hold a current North Carolina certificate in a teaching area and complete a master's degree program offering the 077 certification

ROLE

Typically, an individual serving as a computer coordinator/supervisor/director for the school system has the instructional responsibilities for a system-wide computer education program including program development, personnel, and budgeting. This individual may be assigned one or more of the following roles:

- Initiates and leads system-wide planning for the instructional computer program
- Develops, coordinates, and frequently delivers staff development on student computer skills and Level I computer competencies for educators
- Designs and conducts model teaching lessons or units for replication or follow-up by the classroom teacher or media professional
- Serves as the lead person at the system level for special computer education activities involving students or staff
- Oversees the system computer education budgeting and purchasing

- Supervises personnel who troubleshoot software and equipment problems
- Works with other resource personnel or supervisors to integrate computer skills into the total school program
- Serves as a clearinghouse for new applications, materials, and emerging technologies

This individual may report to the superintendent, an assistant superintendent, a director of instruction, or a media and technology director.

JOB DESCRIPTION

The job description for a computer coordinator may vary depending upon the responsibilities assigned by local school system administrators. However, one of the general job descriptions and performance appraisal instruments, adopted by the State Board of Education, for system-level directors, coordinators, and supervisors is an appropriate basis for local modification. (For a sample job description for a computer coordinator, see **Recommended Job Description for Computer Coordinator** in the Personnel section of the Appendix.)

EVALUATION

The computer coordinator/supervisor/director may be evaluated using the performance evaluation instrument for a supervisor or director. Local districts may add functions to reflect the full range of responsibilities.

MEDIA AND TECHNOLOGY SUPPORT STAFF

A support staff relieves media and technology professionals of many routine yet important and necessary duties. In cases where no support staff exists, professionals **must** perform many of the tasks—reducing the potential impact they may have on the instructional program of the schools. Specialized training, specific competencies, or potential for on-the-job training are the criteria for selecting support staff.

Typical support staff may include:

Position	Location
• Media Assistant (clerk)	Building or System-level
• Media Technician	System-level
• Distance Learning by Satellite (DLS) Facilitator	Building or System-level
• Lab Assistant	Building-level

The following information about recommended competencies, roles, typical duties and responsibilities, and suggested evaluation criteria has been developed with input from local school professionals. It is important to recognize that implementation of innovations evolving from site-based management will continue to shape the types of support staff needed in the schools, as well as their roles and responsibilities.

> *"All media programs, regardless of size, need an adequate level of support staff. The support staff works under the guidance and supervision of the professional staff, and provides services which free the professional staff to work directly and closely with students and faculty in the school."*
>
> Information Power
> 1988, p. 62)

Media Assistant (Clerk)

RECOMMENDED COMPETENCIES

Media assistants (clerks) should have a high school diploma or GED. Additional training and/or experience in basic business operation is desirable. Media assistants perform routine tasks in the areas of materials and hardware acquisition, file and records maintenance, circulation, and use of materials and equipment. Some of the competencies that they demonstrate include: typing, word processing, and updating; filing, sorting, organizing, and shelving; maintaining records, inventory, and accounting; and computer searching.

ROLE

Media assistants with secretarial and clerical responsibilities perform tasks related to the ordering, receipt, maintenance, inventory, production, circulation, and use of materials and equipment. Media assistants working directly with users must be able to respond effectively to their needs. They carry out all tasks under the direction of the professional members of the library media staff, reporting, as appropriate, to designated professionals or technicians. The following list illustrates the duties and responsibilities typically associated with the role of media assistant.

1. Clerical Responsibilities
    - Assume general clerical responsibilities
    - Compile statistics
    - Order and process print and nonprint materials
    - Maintain inventory of and order supplies
    - Circulate print and nonprint materials
    - Perform other media center duties as assigned

2. Technical Responsibilities
    - Maintain catalogs
    - Perform preventive maintenance and minor repairs on equipment
    - Maintain media collection
    - Perform other media center duties as assigned

3. Instructional Support Responsibilities
    - Assist students and staff with location and use of materials and equipment
    - Prepare displays
    - Schedule use of and deliver materials and equipment
    - Assist with preparation of bibliographies
    - Perform other media center duties as assigned

SUGGESTED EVALUATION CRITERIA

LEA personnel will develop procedures for collecting data to document performance in areas defined as typical duties and responsibilities.

1. Clerical Responsibilites
2. Technical Responsibilities
3. Instructional Support Responsibilities

Media Technician

RECOMMENDED COMPETENCIES

Media technicians have competencies in one or more fields, e.g., graphics production and display; information and materials processing; photographic production; operation and maintenance of instructional equipment; management of computer systems; television production; and, installation of system components. Large schools requiring multiple support personnel for their library media center may employ technicians, even though system-level staffing includes technicians as well.

ROLE

Media technicians perform routine technical duties defined in a job description developed by LEA personnel. General knowledge about how their services influence teaching and learning is helpful to media technicians. All tasks are carried out under the direction of media and technology professionals at the building or system level. Illustrative tasks performed by media technicians follow:

1. Equipment Management
   - Provide instruction in the operation and use of instructional equipment
   - Repair and maintain equipment
   - Maintain cumulative records listing repairs and the condition of equipment
   - Supervise the use of specialized equipment (i.e. television videotaping equipment, photographic lab equipment, and computer lab equipment)

2. Production
   - Produce graphics and display materials such as transparencies, posters, charts, graphs, displays, exhibits, and materials for television programs
   - Involve and assist students and teachers with production techniques when making their own tapes, slides, transparencies, charts, etc.
   - Perform photographic production work such as developing still photography, processing motion photography for films, videotaping television broadcasts, televising local and in-school events, and developing black-and-white film

3. Miscellaneous Tasks
   - Assist in the processing of information and materials by performing such tasks as bibliographic searching and processing of materials

SUGGESTED EVALUATION CRITERIA

LEA personnel will develop procedures for collecting data to document performance in areas defined as typical duties and responsibilities.

1. Equipment Management
2. Production
3. Miscellaneous Tasks

DLS Facilitator

RECOMMENDED COMPETENCIES

DLS (Distance Learning by Satellite) facilitators should have a high school diploma or GED. Additional training and/or experience in organizational skills, student management skills and use of equipment is recommended.

ROLE

The facilitator's active participation during a course makes a critical difference in the level of student and staff involvement and success. In cases of direct student instruction courses, the TI-IN teacher depends on facilitators to recognize and report the level of student involvement and to assist students in maintaining active participation.

In the case of staff development courses, the facilitator is needed to introduce staff members to the use of equipment and encourage active participation. The facilitator should also be present during the staff development courses or any other TI-IN program in which your site participates. The specific duties and responsibilities of DLS Facilitators will be determined by the types and numbers of DLS courses provided. The following is an illustrative, but not exhaustive list of duties and responsibilities.

1. Attend Training Sessions

2. Monitor Equipment Operation
    - Demonstrate proper use of equipment
    - Report technical difficulties
    - Record courses for replay

3. Support Instruction/Staff Development
    - Disseminate and return, as needed, course materials
    - Monitor and facilitate instruction
    - Keep records
    - Consult with the TI-IN instructors (for direct instruction)
    - Administer evaluations

SUGGESTED EVALUATION CRITERIA

LEA personnel will develop procedures for collecting data to document performance in areas defined as typical duties and responsibilities.

1. Able to use equipment
   a. start monitor for designated programs
   b. record programming
   c. call originating site using Audio Visual Unit's (AVU) handset
   d. receive computer printouts on AVU printer
2. Has necessary instructional materials/handouts available for each session
3. Returns student assignments to satellite teacher on a timely basis
4. Maintains an orderly classroom
5. Keeps students on task
6. Maintains a positive classroom environment
7. Handles administrative procedures with ease
8. Coordinates efficiently pre-registration, facility scheduling
9. Maintains accurate records for renewal credit activities

Computer/Technology Lab Assistant

RECOMMENDED COMPETENCIES

Computer/technology lab assistants are individuals hired as assistants with responsibilities in the area of computers and/or technology in general. Such individuals need to have the competencies required by the school system for assistants. Depending on the job description, a computer/technology lab assistant may need previous experience or training in computer science or education, computer repairs, and technology equipment operation.

ROLE

The computer/technology lab assistant performs tasks related to the operation of a computer lab or mini-labs located in a school and coordinates computer and technology resources and equipment use by school staff. This person works with school staff on such tasks as receipt, maintenance, inventory, production, circulation, and use of materials and equipment. In some instances, the computer/technology lab assistant serves as a teacher assistant to students using the software, resources, and equipment. This assistant may be supervised by the school media coordinator or other school administrator but may report to the system-level computer coordinator.

Duties and responsibilities will vary according to the job description but may include many of the following:

1. Technical Responsibilities
   - Oversees the working operation of the computers and related peripherals
   - Performs troubleshooting functions
   - Coordinates or repairs equipment
   - Provides technical information for ordering
   - Loads and maintains software collection on a network
2. Instructional Support Responsibilities
   - Serves as a teacher assistant in the lab, mini-lab, or class room
   - Assists students using software and equipment
   - Instructs staff and students in the operation of software and equipment
3. Clerical Responsibilities
   - Inventories software, materials, and equipment
   - Performs diskette copying
   - Responds to information requests from staff
   - Conducts software and networking backups

SUGGESTED EVALUATION CRITERIA

School system personnel have the flexibility to evaluate the computer/technology lab assistant using the same instruments and process established for assistants in general or to modifiy the evaluation to reflect specific technology skills required by the school system.

ADULT VOLUNTEERS AND STUDENT ASSISTANTS

ADULT VOLUNTEERS

Adult volunteers assist the professional media and technology staff in their efforts to provide maximum services to the school's students and staff. Involving volunteers in the media and technology program taps community resources and promotes understanding and communication. While their unique contributions are invaluable to the media and technology programs, volunteers should never be considered as substitutes for trained, paid support personnel.

Volunteers may work with students, as well as perform clerical and technical functions. Tasks vary from school to school. Volunteers need only show a desire to help and a genuine concern for children and school.

Suggested Activities

- Read aloud to individuals or small groups.
- Operate or supervise student operation of equipment.
- Assist in the preparation of bulletin board displays or exhibits.
- Assist in the preparation of instructional materials by lettering, laminating, dry mounting.
- Answer telephone.
- Type lists, bibliographies, etc.
- Prepare materials for picture or information (vertical) file.
- Assist in performing clerical tasks (e.g., duplicating materials).
- Plan, promote, and organize special programs/events (i.e. book fairs).
- Assist students in locating materials, as appropriate.
- File publishers' catalogs.
- Mend books and other materials.
- Assist with circulation.
- Process overdue notices.
- Read shelves.
- Shelve materials.
- Type orders.
- Assist with annual inventory of equipment and materials.
- Process new materials.
- Assist with computerized data entry.
- Produce signs and mobiles.
- Assist with beautification and maintenance.

STUDENT ASSISTANTS

Suggestions for a Successful Volunteer Program

- Plan before the volunteer arrives.
- Always have something for volunteers to do when they arrive.
- Provide adequate training.
- Assign tasks to fit volunteer's expertise and interests.
- Assign tasks rather than hours.
- Praise and recognize volunteers.

The role of the student library media assistant is a service learning experience. These students are valuable assets whose volunteer efforts contribute significantly to the school library media program. In return, great care should be taken to ensure that students receive educational benefits from working in the media center. Students are able to develop life-long information skills as a result of this experience.

> *"Through the integration of basic learning with needs of society, students can develop a zest for life-long learning which characterizes active and responsible citizenship."*
>
> A REPORT FROM THE GOVERNOR'S ADVISORY COMMITTEE TO STUDY ACADEMIC CREDIT FOR HIGH SCHOOL VOLUNTEERISM: SERVICE LEARNING, 1983

An organized program of instruction and training should emphasize the media center's goals, objectives, and the tasks to be accomplished. Service learning experiences begin in the early grades with simple tasks such as checking out books, shelving materials, and reading to younger students. As students move from the elementary grades, a more structured skills/service program is necessary. Appropriate academic credit for high school student media assistants may be available when an approved curriculum and evaluation of student learning is offered.*

Suggested Elementary/Middle School Activities:

- Circulate materials
- Shelve materials/ read shelves
- Prepare overdue notices
- Operate equipment
- Check in new magazines
- Maintain magazine display racks and back files
- Type correspondence and book cards
- Process new materials
- Help maintain information file
- Maintain vendor catalog file
- Assist in monitoring student pass system
- Assist in photocopying
- Design/prepare bulletin boards and displays

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*Student Media Assistants' Program is allowed within the policy defining a credit course adopted by the State Board of Education on May 5, 1988.

- Participate in storytelling and puppet shows for younger students
- Assist in preparation of instructional materials (games, transparencies, etc.)
- Assemble materials for reserve or classroom use
- Assist with inventory
- Assist with book fairs or other special activities
- Help other students locate material
- Act as student liaison between media center and classrooms
- Enter and retrieve computer data

Suggested High School Activities:

- Develop a curriculum and formal method of evaluation (Refer to **Prototype Curriculum and Evaluation for Student Library Media Assistants' Program**, mailed to school systems, January, 1989.)

ASSESSING YOUR PROGRAM

What is the status of this component of your media and technology program? By answering the following questions, you can begin to collect the information you need for the implementation of a local planning and assessment model. For further information about the process, refer to the Planning and Assessment chapter.

PERSONNEL

1. **Are media and technology professionals certified according to North Carolina guidelines?**
2. **Do you have sufficient staffing for the membership in each of your schools?**
3. **Do your media and technology personnel work well with adults as well as students?**
4. **Does the media coordinator participate in curriculum and grade level planning meetings?**
5. **Do media and technology personnel make an effort to communicate the school media program to the community?**
6. **Do the media coordinators function as teachers as well as support persons?**

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System-Level

INTRODUCTION

Local school systems are responsible for providing media and technology programs at the system-level as well as the building-level. These programs are organized in a variety of ways in the schools of North Carolina—from comprehensive programs where all components are organized under one large program, with a system-level media and technology director administering the program, to separate library media and computer programs, each administered by different supervisors/directors. In some cases, the superintendent designates a general supervisor to be the media and technology contact person at the central office.

System-level programs should function under the direction of a certified supervisor/director and should offer a broader range of services than is possible in the individual schools. Through the utilization of media and technology, these services can improve, enhance, and support student learning and teacher performance. Factors contributing to the range and quality of the program include the school system's educational philosophy; the management structure of the system; the scope of the instructional program; the localized needs of students/teachers; and, the availability of staff, facilities, and funding.

System-level leadership of media and technology programs increases the opportunities for equitable and effective programs at each school within a district. Having a central contact provides the building-level professional with a sounding board for programs and trends throughout the system, the state, and the nation.

System-level personnel have the primary responsibility for:

- Creating the vision of the appropriate role of media and technology in learning
- Preparing administrators, teachers, and media professionals to educate students who will become active participants in the "Information Society"
- Communicating the vision through services that relate to public relations, curriculum involvement, resources, budget, facilities, and personnel development

By modeling professionalism, collaborating with other instructional leaders, offering program leadership, and supporting building-level endeavors, media and technology supervisors/directors lay the foundation for an educational bridge to the future.

> *"Schools look to district programs to provide advocacy, some technical services, and opportunities for resource sharing and cooperative programs."*
>
> Information Power,
> 1988, p. 102

CREATING & COMMUNICATING THE VISION

CREATING THE VISION

In an educational climate that fosters a community in which students and staff develop lifelong learning skills, the essential information processing skills are often subsumed. On the eve of the 21st century, it is imperative that schools graduate students who can collaborate, solve problems, think critically, function at higher literacy levels, adapt readily to change and create, synthesize, and apply information. A district-level advocate for the appropriate role of media and technology in the learning process can be a cheerleader for a curriculum that meets individual learning needs and provides students with survival skills for the "Information Society."

In light of local and national needs, media and technology leaders plan for educational change by modeling professionalism; collaborating with other instructional supervisors and administrators; providing direction for building-level professionals and offering support for district, state, and national endeavors. Media and technology leaders with a repertoire of specialized services can construct a sound framework that bridges the present and the future.

COMMUNICATING THE VISION

Media and technology leaders communicate the goals and needs of the school and the district to chief administrators, governing bodies, and the community; they are responsible for all aspects of the system-level program. Their principle functions include services, materials, equipment, facilities, and the operation of support components.

Public Relations

The system-level supervisor/director:

- Clarifies the role of media and technology in the context of the instructional program
- Models professionalism by encouraging awareness and utilization among other central office staff members across the curriculum
- Coordinates communication between the school system and the community
- Functions as liaison to other school systems and the state agency
- Facilitates exchanges of ideas and resources

- Promotes a positive image of the school system, in general, and the media program, in particular
- Publicizes media and technology programs and projects

Curriculum Involvement

The system-level supervisor/director:

- Participates, as a member of the educational team, in the development and implementation of the statewide curriculum, in the promotion of alternative teaching/learning strategies, and in the use of appropriate media
- Designs, in coordination with system- and building-level instructional leaders, a sequential information skills and computer skills continuum to be integrated with classroom teaching activities
- Assists building-level media and technology professionals in developing program goals and objectives consistent with school, system-level and state missions
- Promotes expansion of programs that integrate the teaching of skills for finding, evaluating, and using information and technology with the teaching of subject content
- Identifies demonstration sites and methods for effective integration of media and technology activities and instructional units in building-level programs
- Plans with the building administrator to ensure that media and technology programs further the instructional process by increasing the effectiveness of the media and technology professional as information specialist, teacher, and instructional consultant
- Coordinates the acquisition and circulation of learning resources needed to support curricular programs

Facilities Planning

The system-level supervisor/director:

- Provides leadership in facilities planning by working closely with the superintendent, architect, and building-level planning committees to ensure that adequate school media facilities are constructed (See the **Facilities** chapter for further information).

RESOURCES AND SERVICES

System-level collections and services are designed to respond directly to specific interests and needs of students, teachers, and administrators. The level of services is determined by size, philosophy, and commitment of the system; the expertise and additional responsibilities of the person coordinating the program; and the funding provided.

School systems that choose to fund their own system-level services may wish to include the following options: professional collections, production services, centralized processing, equipment repair, and courier service.

Systems limited by size and finances may consider alternative sources of funding in developing an adequate program. Alternative sources may include outside program, equipment, or service contracts; multisystem cooperative ventures for resource sharing and processing; or participation in consortia/networks at the regional level. The successful application of one or more alternatives previously suggested can reduce costs and staff requirements.

Every school system requires a centralized media and technology service that provides school-based personnel access to instructional materials, equipment, services, staff development, and technical expertise unavailable at the individual school site. Additional staff personnel with appropriate technical expertise are recommended.

Each system should:

- Establish a technology plan
- Provide technology ideally suited to student needs
- Obtain specialized software and equipment including, but not limited to, graphics packages; rapid, good quality printers for desktop publishing projects; scanners and testing software; science laboratory devices; and specialized software programs designed for exceptional children
- Negotiate site licenses and networking agreements
- Review relevant software specifically suited to student requirements such as MECC and encyclopedias on CD-ROM
- Make available expensive/rarely-used equipment and materials for loan

Desirable Staffing Patterns

The design of the curriculum, the scope and depth of collection and services provided, the number of users, and the provisions for extended hours of service determine the number and types of personnel needed. Alternative methods of service and delivery may be considered; however, the ultimate goal is quality support for the instructional program.

Types of system-level personnel that may be included are media and technology director, media supervisor, computer coordinator, catalogers, graphic artists, photographers, and technicians for production, processing and repair (See **Personnel** chapter for further information).

Once a decision is made to provide specified media and technology services at the system-level, plans must include appropriate personnel, resources, facilities, and budget to support those services. Several examples of system-level services are discussed below.

Professional Collection

A system-level media collection provides schools with access to more expensive media formats and equipment not within the reach of the school budget; e.g., laser discs, real objects, videocassettes, large models (See **Professional Collection** in the System-Level section of the Appendix).

A professional reference collection is provided to encourage independent research and to support guidance in the selection of materials and equipment for the building-level programs.

The collection may include, but is not limited to:

- Books
- Curriculum guides, courses of study, and teacher's manuals
- *Education Index*, *Current Index to Journals in Education*, etc.
- Journals, current and back issues (hard copy or microfiche)

- Government documents
- Microforms
- Pamphlets
- Publications from professional organizations
- Reference materials, including such items as encyclopedias of education, education almanacs, dictionary of educational terms, education acronyms, information on education associations, etc.
- Resource units
- Audio recordings (those with permission to duplicate and distribute to schools)
- Film and videocassettes
- Projectors/16mm and videocassette players (VHS), laser disc players
- Kits (commercial kits as well as those prepared at the system-level center)
- Textbooks currently on the adoption list as well as textbooks no longer on the list
- Files on censorship, copyright, and software selection
- North Carolina Department of Public Instruction publications (list available from Communication Services)
- Advisory Lists from Media Evaluation Services (DPI)
- Online database access or CD-ROM access to ERIC*/other information files

*ERIC (Educational Resources Information Center) is a federally- sponsored database that began in 1966 and provides access to education-related material that is not otherwise available. An indispensable tool for education researchers and practitioners, the reference citations in the ERIC database can be accessed through print indices (*Resources in Education* and *Current Index to Journals in Education*), online searches (access through DIALOG, MAXWELL ONLINE, etc.), or ERIC on CD-ROM (SilverPlatter, etc.). An ERIC search yields two types of citations: (1) ERIC documents that are available on microfiche in research and special libraries or as paper copies available through ERIC Document Reproduction Services; and (2) education journal articles.

Production Facilities, Services, and Equipment

Locally produced media such as slide/tape programs, videotape production and/or duplication, and computer graphics are necessary to support the school system's educational program, including its public relations and staff development activities. System-level production facilities enhance the instructional program by providing equipment, materials, and expertise for media and technology professionals and teachers who lack access to production facilities in their respective schools (Refer to the **Resources** chapter for further information).

Centralized Processing

Centralized processing provides uniformity and continuity in cataloging and classification of resources. Providing this service at the system-level may be cost-effective because it allows the building-level professional more time to interact with students and teachers and to develop the program. In addition, the need for costly duplication of bibliographic tools is eliminated, thus reducing unit cost of cataloging. Central cataloging based on automated bibliographic services or online access and computerized catalog card production and processing should be used (See **Thinking About Centralized Processing** in the System-Level section of the Appendix).

Other services such as centralized ordering/processing from jobbers and system-wide site licenses for bibliographic records also have implications for continuity, discounts, and increased program time for building professionals.

Equipment Repair and Maintenance

Provision must be made for repairing and maintaining audiovisual and electronic equipment. Implementing this service locally reduces down time and is more cost-effective. Services include pickup and delivery of equipment; inspection, repair, and preventive maintenance; ordering spare parts; and maintaining an inventory. Since a sufficient budget to support this service is critical, two or more systems may share the expense of equipment repair. Additionally, systems may choose to contract with repair services outside the system.

Courier Service

System level services discussed in this section are dependent on an almost daily pick-up and delivery system. This task could be worked into an overall staffing design that consolidates or alternates among personnel with similar responsibilities.

System-level Budgets

The media and technology supervisor/director may be asked to submit a budget request adequate to support a system-wide program. Additionally, certain system-level professionals may be responsible for the allocation of specific funds set aside from individual school allocations for centralized purchasing. Other budget requests usually managed by the media and technology supervisor/director include periodicals, specialized media supplies, maintenance of central print and nonprint collections, equipment service and repair, and salaries of system-level staff.

Building-level Budgets

Most North Carolina state allocations to school systems are based on each school's Average Daily Membership (ADM). Specific funds, however, do not necessarily "follow the child." A superintendent may allocate more or less funds to specific schools providing that the guidelines established by the local Board of Education are followed. Principals and site-based management teams are responsible for allocating specific funding amounts for building-level media and technology programs. In making a decision, the school principal and team should consult with the media and technology supervisor/director and the school's Media Advisory Committee to determine basic program needs and to establish funding priorities.

The system-level media and technology supervisor/director serves as a consultant in the budgeting process. Suggested strategies in this area are presented in the **Budget** chapter of this document. In the budgetary planning phase, it is critical that building-level media personnel as well as the system-level professionals, be aware of the total funding available to media and technology programs on the local, state, and federal levels.

Federal Funds

The system-level media and technology professional is responsible for identifying available federal funds and interpreting its potential uses for building-level public and nonpublic school personnel. Most federally funded programs include an instructional materials component for which the system-level media person acts as a consultant. Establishing a working relationship with the federal program director(s) is necessary in order to explore funding options which will strengthen the total media and technology program (See the **Budget** chapter for further information).

PERSONNEL DEVELOPMENT

Demands for more and different forms of information will require media and technology professionals to join the community of lifelong learners who prepare for and are able to deal with technological innovation on its own terms. Professionals will need to be flexible thinkers who are able to take risks. Developing personnel for the 21st century is a complex responsibility, requiring comprehensive planning and thoughtful delivery (Lewis, in press).

System-level leaders must create an environment that is supportive of the move from isolation to collaboration—teaming. Such a shift in focus intensifies the challenge to define the role of media and technology programs and professionals within the school system's instructional program. The system-level supervisor/director provides leadership and support for professional growth activities which lead to greater competence and creativity as new partnerships are formed.

Media coordinators tend to remain in their positions for longer periods of time, and fewer new candidates are entering the field. Therefore, professional growth opportunities for the existing staff will be necessary if the change process is to be effective in the schools. Because many of the skills needed to deal with change are the same for media and technology professionals *and* teachers, a **comprehensive plan** for staff development at the school and district level can meet those skill needs for everyone. Additionally, there are new skills and knowledge related to the professional role of media and technology personnel.

Sources for professional growth opportunities range from the traditional university course to the latest distance learning by satellite programming. Several small school systems may collaborate to provide opportunities not affordable to one alone. Visits to other programs encourage media and technology personnel to add exemplary or effective practices to their own programs. Media and technology personnel who read widely, talk to professionals with different points of view, and attend national, regional, and state conferences are broadening their perspectives.

A major component of the comprehensive planning process is *needs assessment.* Four sources of information can be helpful in assessing performance: self-assessment, formal performance appraisal, peer feedback, and user input. Media and technology professionals are encouraged to use all available sources and self-reflection to develop a list of strengths and weaknesses.

Staff development is a program to guide and encourage employees to develop their skills and capabilities on a continuing basis to improve the performance of both the individual and the organization

Lipow, 1988, p. 9

Once a list of strengths and weaknesses is developed, its outline can become a professional growth plan. The professional growth plan is then matched against all available sources of staff development. System-level supervisors/directors are responsible for providing the staff development opportunities identified by media and technology personnel as necessary to their professional growth (See **Tips for Effective Staff Development Programs** in the System-Level section of the Appendix).

ASSESSING YOUR PROGRAM

What is the status of this component of your media and technology program? By answering the following questions, you can begin to collect the information you need for the implementation of a local planning and assessment model. For further information about the process, refer to the Planning and Assessment chapter.

SYSTEM-LEVEL

1. **Is the system-level media and technology program directed by a certified supervisor/director with expertise in the field?**
2. **Does the system-level program offer a broad range of services?**
3. **Does the system-level media and technology professional model professionalism and collaboration by forming partnerships in the central office and elsewhere?**
4. **Does the system-level media and technology professional serve as the chief advocate for strong media and technology programs that play a significant role in the instructional program?**
5. **Does the system-level media and technology professional take a leadership role in facilities planning?**
6. **Do the resources and services provided at the system-level respond to the specific needs of the schools, teachers, and students served?**
7. **Does your school system have a written technology plan?**
8. **Is there a system-level professional collection?**
9. **Does the system-level program provide leadership in budget planning?**
10. **Does the school system provide a program of staff development that meets the needs of all media and technology professionals?**

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Appendix

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Program APPENDIX

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MEDIA ADVISORY COMMITTEE

The Media Advisory Committee (MAC) has long been an assumed component in the selection of materials in North Carolina's public schools since most school system board policies require such a committee. However, the responsibilities of this committee should not be limited to resource selection. An active MAC can: (1) serve to strengthen the media program and in turn strengthen the total instructional program in the school; (2) promote positive relationships among media personnel, teachers, students, and administrators; (3) serve as a line of communication between the school and community; and (4) assist in maintaining a balanced collection of resources and equipment. Active involvement of the Media Advisory Committee in any project leads to better awareness, understanding, support, and commitment to the media program.

Make-up of the Committee

Appointed by the principal, who serves on the committee, the MAC generally is composed of a representative from each grade level in an elementary and middle school or the department head (or a representative) in a high school as well as special teachers. The committee should also have student and parent representation. The media coordinator chairs the committee, any other media staff are members, and the system level media supervisor serves as a resource person.

Each member has something to provide to the Committee. The media coordinator will serve as chair and will provide leadership and expertise in evaluation and selection techniques for resources. Teachers will add their knowledge of the curriculum content, instructional needs, learning styles, and teaching methods. The principal will provide budgetary information, and information relating to curricular changes, textbook adoptions, and special projects. The system level media supervisor will serve in an advisory capacity. Students can provide information as to personal needs and likes of the student population; they also possess the ability to convince parents and teachers that certain resources are not hazardous to the health or mind. Parents will represent the community concerns, mores, and standards.

Functions and Responsibilities

The functions and responsibilities of the Media Advisory Committee can be divided into two areas: (1) serving in an advisory capacity to the media staff and program, and (2) maintaining a collection of resources that reflects all curricular and individual needs.

The MAC can serve in many ways to promote the overall media program. The committee can assist the media coordinator in planning for the media program, setting goals and priorities, evaluating the effectiveness of the program, and considering problems that arise. Much of the information regarding media programs—program descriptions for Southern Association— include statements such as "the media center is the hub of the school," "all instruction centers around the media center," "the school cannot exist without a well balanced media program."

What are some things the MAC can do to make this a reality?

- encourage the integration of information skills into the study of other subjects by establishing ways for this to happen
- promote accessibility to the media center through flexible scheduling
- devise opportunities for students to use the media center

- encourage teachers to have follow-up activities in the classroom for reinforcement of information skills
- determine if circulation procedures and policies are as simple as possible and allow students access to resources when needed
- initiate book fairs and other activities which strengthen and promote the media program
- communicate expectations — what teachers expect from the media program and what the media coordinator expects from teachers
- solve problems (i.e., insufficient materials on a given topic for several classes/grades to study it at the same time; at what level should certain material be used)

The function of maintaining a well-balanced media collection is a primary responsibility of the Media Advisory Committee. The media coordinator is responsible for coordinating the acquisition of all media in the school but cannot assume the total responsibility for selecting every item. All members of the MAC need to provide input.

A well-balanced collection is balanced in terms of the needs of the school—balanced in curriculum areas, learning styles, and interests. Building a balanced collection involves: (1) careful planning which should be provided by the media coordinator; (2) an understanding of the school's instructional program; (3) an understanding of the abilities, interests, and problems of students; (4) a broad current knowledge of materials available and related equipment which is provided by school and system level media personnel; and (5) an understanding of the system's selection policy and budget procedures.

Decisions as to which materials are to be purchased for the school are a serious responsibility. With the cost of materials constantly increasing, thoughtful consideration should be given to every item recommended for purchase. A systematic procedure for the MAC should be developed to ensure the acquisition of media resources to provide a well balanced collection. The process should include:

1. examine the present collection—review inventory records, annual media reports, circulation records
2. look at the budget—The committee should be informed of all available funds in order to set priorities for expenditures.
3. examine the objectives and curriculum of the school—changes in curriculum, new textbook adoptions
4. look at special needs—replacement of materials and equipment, requests that cannot be met, will there be a school-wide emphasis on certain areas
5. look at needs and interests of students
6. look at new technologies—The committee should initiate and plan for the use of new technologies.
7. review the selection policy
8. determine school-wide needs and prioritize the needs
9. review, evaluate and preview materials—use approved lists and selection tools
10. make recommendations for purchase
11. assist in evaluating materials when they are received—read books, preview nonprint materials
12. assist in evaluating gift materials—use same procedures and criteria asselecting new materials
13. assist in the continuous evaluation of the collection—which materials and equipment should be weeded from the collection. Worn and obsolete materials discourage students and teachers in

their search for reliable information, they encourage users to handle materials carelessly, and they distract from the appearance of the collection. It is much worse to provide mis-information than to provide no information.

14. re-evaluate challenged materials and make recommendations to the committee appointed to handle challenged materials

Responsibilities of the Media Coordinator

1. Be an effective leader — be well planned and prepared for MAC meetings. Don't waste the time of committee members. Make certain everyone is aware of the responsibilities and procedures. Provide agendas prior to the meeting.
2. Keep up-to-date on available materials and equipment.
3. Be involved in the school curriculum — attend grade level or departmental meetings, be familiar with courses of study, competency goals and textbooks.
4. Provide the committee with appropriate reviewing sources, criteria and procedures for evaluations.
5. Conduct interest inventories with students to determine current topics of interest.
6. Provide the committee with inventory, circulation and request information.
7. Provide materials for hands-on examination when possible.
8. Keep a consideration file—important to verify information for ordering and to justify the purchase.
9. Make professional judgements regarding the addition of new media to the collection

Responsibilities of Teachers

1. keep the faculty informed of the selection process
2. actively seek input from teachers and students
3. inform teachers of what the committee has determined to be school wide and support the decisions of the committee
4. ask opinions of other teachers when reading reviews
5. inform teachers of recommendations for purchase
6. actively participate in and support the selection process

Results of an Active Media Advisory Committee

While the selection of materials, allocation of the media center budget, and weeding of the collection are the traditional roles of the Media Advisory Committee, this committee is a public relations tool for the school's media program. Since the members work so closely with the materials housed within the media center, they also realize the potential for increased instructional enrichment and enhancement when these resources are used. Because, by nature of their positions, the committee members are usually the instructional leaders within their schools, Media Advisory Committee members can model the effective use of a variety of resources available to supplement the textbooks. The MAC can also make media center needs known to the principal and other teachers. The MAC can, in turn, be a wealth of information, conveying new curriculum offerings, program ideas, and educational trends to the media coordinator. In short, the Media Advisory Committee can be the eyes, ears, and mouthpiece for the media center and its program. It is the key to quality.[1]

Bradburn, F. B. (Spring, 1988). The school media advisory committee: key to quality. North Carolina Libraries, p. 16.

SERVICES FOR EXCEPTIONAL CHILDREN

"The library is one place where the child may perform at his or her own academic level in an accepting and uncritical environment."

Ruth Velleman in
SERVING PHYSICALLY DISABLED PEOPLE: AN
INFORMATION HANDBOOK FOR ALL LIBRARIES

Since the passage by Congress in 1975 of Public Law 94-142, the Education for all Handicapped Children Act (now entitled Individuals with Disabilities Education Act), emphasis has been on integrating students with handicaps into general education. One of the most natural places within the public school to integrate handicapped youngsters is the school's media center. Because so many of the activities in the media center can be accomplished on an individual basis and because ability grouping is not stressed here, all children have the potential for success, each at his or her own ability level.

The challenge to the Media Coordinator, whether working with kindergarten children, high school seniors or anyone in between, is to make the acquisition of information skills relevant to a student's everyday life and experience. This is particularly important in working with children for whom learning is difficult for either physical, emotional, or mental reasons. All children should be able to see a need for the information they are learning. Because of the physical and mental effort involved in the acquisition of knowledge by a child with a handicap, this relevance is particularly important.

GENERAL STRATEGIES FOR WORKING WITH CHILDREN WITH HANDICAPS WHO HAVE BEEN INTEGRATED INTO THE MEDIA CENTER

1. The message from the media center conveyed to all children should be: "You are welcome here; we're glad you came."

2. Establish routines for all children to follow and be consistent. Routine and consistency are real "security blankets" for children with handicaps.

3. Offer instruction in several formats, e.g., write directions on the chalkboard, read them aloud, and allow a peer tutor to show another child.

4. Be willing to repeat directions several times without losing patience.

5. Allow students to work in small groups as often as possible, placing one child with a handicap among several of her/his peers. Don't allow the youngsters with handicaps to group themselves together if at all possible.

6. Whenever possible, allow the child with a handicap to be a group leader.

7. Don't "baby" a child who has a handicap. Encourage her/him to do as many things for her/him self as possible.

8. Do not tolerate disruptive behavior from a child with a handicap that would be unacceptable from another child.

9. Do not give too much information at one time. Having separate sheets of paper for separate activities or questions is less overwhelming to a child with a handicap.

10. Allow children to see the similarities in people by helping them understand the differences. Use fiction and nonfiction books about handicaps with classes. (Check the book NOTES FROM A DIFFERENT DRUMMER by Barbara Baskin and Karen Harris for suggested titles.)

11. Continuity is particularly important for children with handicaps . Refer to past lessons, future plans, homework assigned.

12. Use a game format whenever possible. This allows children with handicaps to feel part of the group.

13. Youngsters with handicaps often have trouble remembering procedures. Continue to remind children of check-out procedures, conduct expectations, etc. throughout the year.

14. Give children with handicaps a feeling of ownership in the media center. Allow them to help check out books, put up or take down bulletin boards, straighten tables and chairs.

15. Remember: Children with handicaps are more similar to other children than they are different. In the media center, they will be like their normal peers, only slower.

16. Best allies are resource teachers who work with children with handicaps all the time. Ask for suggestions and talk about strategies for working with particular children. KEEP THE LINES OF COMMUNICATION OPEN!

NOTE: Each child with a handicap is unique, a major reason federal and state laws emphasize individualization. These 16 strategies are not intended to imply that all children will respond to the strategies in the same manner. Rather, these are some strategies that have been found to be effective for many children with handicaps.

LIBRARY ASSIGNMENTS: TIPS FOR SUCCESS
(To the Teacher)

Developed by Durham County Schools

In the past, some students have experienced frustration in using the public library and school media centers to complete research assignments. Aspects of this problem include limited media collections, unrealistic assignments, student confusion, and overworked library staffs. However, the underlying source of the problem is a failure of communication among three groups: teachers, students (and their parents), and library personnel. So that you may more effectively teach your students research skills, a committee of teachers, school media coordinators, and public librarians has published these guidelines.

1. DESIGN APPROPRIATE ASSIGNMENTS

    A. Identify the purpose for each research assignment. Are you making the assignment in order to teach the process of research or in order for the student to collect a specific body of information? Do you want your students to learn to use a particular type of reference material or to explore several types in the pursuit of one topic?

    B. Does your school media center have adequate materials for all of your students to complete this assignment, or will your students need to go to the public library? Often, the most successful research assignments are those which can be done during class time in the school media center. If the students will need to go to the public library, make sure they are likely to be able to find materials there.

    C. What form will the student's final product take? Will the student produce a paper, an oral report, or some other product? Clearly describe the assignment to the students; show them an example, if possible.

    D. Type up the assignment on a handout. Include topic possibilities, description of the final product, parameters such as length and format, type of resources they should use, a timeline of intermediate deadlines, and the final due date of the project. Give a copy to each student (for younger students, you may even want to have a parent sign the sheet to indicate the parent is aware of the assignment). Also send a copy to your school media coordinator. If there is any chance your students may be using the public library, send a copy to the reference librarian at any branch the students are likely to use.

2. PLAN AHEAD AND PROVIDE TIME. Stagger major research assignments with your colleagues so that students will not have more than one at a time and so that the media center resources will not be depleted. Give the students adequate time to get to the public library. (Remember that not all students have ready transportation to the library.)

3. CONSULT WITH YOUR SCHOOL MEDIA COORDINATOR DURING ALL STAGES OF THE PROCESS. As you are designing your assignment, the media coordinator can tell you whether the media collection can support the assignment. The media coordinator can also suggest types of reference materials that will be useful to your students. Given enough lead time, the media coordinator can pull together materials on a given topic, so that your students will be able to work more efficiently during the media center time. School media coordinators can also assist you in teaching information skills.

4. PROVIDE OPPORTUNITIES FOR THE STUDENTS TO WORK IN THE SCHOOL MEDIA CENTER. Problems arise when students are required to do all of the work on a research project outside of class. Some students can't get to the library; others get there after someone else has checked out all of the materials on a particular topic. Some students will send an "emissary" (usually a parent) to do the work for them. Students may enlist more help from a librarian than you would like. Students have even been known to "resubmit" someone else's previously submitted work! Remember, there is no substitute for having the students do the work in front of you! (You can monitor and re-teach as necessary.)

5. MAKE EFFECTIVE USE OF THE PUBLIC LIBRARY. If your students need to use the public library, make sure they know the rules, procedures, and hours of the branches they will use. The libraries are quite willing to send this information to you. Consider including it in the written copy of the assignment. Take time to discuss with the librarians how you would prefer them to help your students. Make sure that both students and librarians know what is "appropriate help" and what is "doing it for them." Make sure the students understand exactly what their responsibility is.

6. STRESS STUDENT ACCOUNTABILITY DURING THE PROCESS. Include intermediate deadlines throughout the period of the assignment. You might want to count these "process" assignments as a part of the final grade.

7. EVALUATE THE PROJECT. After all of the assignments are in and graded, reflect on the entire project. What problems did the students have? Were adequate materials available? What problems did the media support people have? What problems did you have? Did the students produce the products you wanted? Did the students learn to master the process of research a little better? What will you do differently next time? Record these reflections so that you can consult them when you plan this assignment again next year.

Permission to reprint was secured from Durham County Schools.

Library Bill of Rights

The American Library Association afirms that all libraries are forums for information and ideas, and that the following basic policies should guide their services.

1. Books and other library resources should be provided for the interest, information, and enlightenment of all people of the community the library serves. Materials should not be excluded because of the origin, background, or views of those contributing to their creation.
2. Libraries should provide materials and information presenting all points of view on current and historical issues. Materials should not be proscribed or removed because of partisan or doctrinal disapproval.
3. Libraries should challenge censorship in the fulfillment of their responsibility to provide information and enlightenment.
4. Libraries should cooperate with all persons and groups concerned with resisting abridgment of free expression and free access to ideas.
5. A person's right to use a library should not be denied or abridged because of origin, age, background, or views.
6. Libraries which make exhibit spaces and meeting rooms available to the public they serve should make such facilities available on an equitable basis, regardless of the beliefs or affiliations of individuals or groups requesting their use.

Adopted June 18, 1948.
Amended February 2, 1961, June 27, 1967, and January 23, 1980.
by the ALA Council.

ACCESS TO RESOURCES AND SERVICES IN THE SCHOOL LIBRARY MEDIA PROGRAM

AN INTERPRETATION OF THE LIBRARY BILL OF RIGHTS

The school library/media program plays a unique role in promoting intellectual freedom. It serves as a point of voluntary access to information and ideas and as a learning laboratory for students as they acquire critical thinking and problem solving skills needed in a pluralistic society. Although the educational level and program of the school necessarily shape the resources and services of a school library/media program, the principles of the LIBRARY BILL OF RIGHTS apply equally to all libraries, including school library/media programs.

School library/media professionals assume a leadership role in promoting the principles of intellectual freedom within the school by providing resources and services that create and sustain an atmosphere of free inquiry. School library/media professionals work closely with teachers to integrate instructional activities in classroom units designed to equip students to locate, evaluate, and use a broad range of ideas effectively. Through resources, programming, and educational processes, students and teachers experience the free and robust debate characteristic of a democratic society.

School library/media professionals cooperate with other individuals in building collections of resources appropriate to the developmental and maturity levels of students. These collections provide resources which support the curriculum and are consistent with the philosophy, goals, and objectives of the school district. Resources in school library/media collections represent diverse points of view and current as well as historic issues.

Members of the school community involved in the collection development process employ educational criteria to select resources unfettered by their personal, political, social, or religious views. Students and educators served by the school library/media program have access to resources and services free of constraints resulting from personal, partisan, or doctrinal-disapproval. School library/media professionals resist efforts by individuals to define what is appropriate for all students or teachers to read, view, or hear.

Major barriers between students and resources include: imposing age or grade level restrictions on the use of resources, limiting the use of interlibrary loan and access to electronic information, charging fees for information in specific formats, requiring permissions from parents or teachers, establishing restricted shelves or closed collections, and labeling. Policies, procedures and rules related to the use of resources and services support free and open access to information.

The school board adopts policies that guarantee student access to a broad range of ideas. These include policies on collection development and procedures for the review of resources about which concerns have been raised. Such policies, developed by persons in the school community, provide for a timely and fair hearing and assure that procedures are applied equitable to all expressions of concern. School library/media professionals implement district policies and procedures in the school.

Adopted June 26, 1986
AASL DIRECTORS BOARD

STATEMENT OF INTELLECTUAL FREEDOM

The Association for Educational Communications and Technology

The First Amendment to the Constitution of the United States is a cornerstone of our liberty, supporting our rights and responsibilities regarding free speech both written and oral.

The Association for Educational Communications and Technology believes this same protection applies also to the use of sound and image in our society.

Therefore, we affirm that:

Freedom of inquiry and access to information - regardless of the format or viewpoints of the presentation - are fundamental to the development of our society. These rights must not be denied or abridged because of age, sex, race, religion, national origin, or social or political views.

Children have the right to freedom of inquiry and access to information; responsibility for abridgement of that right is solely between an individual child and the parent(s) of that child.

The need for information and the interests, growth, and enlightenment of the user should govern the selection and development of educational media, not the age, sex, race, nationality, politics, or religious doctrine of the author, producer, or publisher.

Attempts to restrict or deprive a learner's access to information representing a variety of viewpoints must be resisted as a threat to learning in a free and democratic society. Recognizing that within a pluralistic society efforts to censor may exist, such challenges should be met calmly with proper respect for the beliefs of the challengers. Further, since attempts to censor sound and image material frequently arise out of misunderstanding of the rationale for using these formats, we shall attempt to help both user and censor to recognize the purpose and dynamics of communication in modern times regardless of the format.

The Association for Educational Communications and Technology is ready to cooperate with other persons or groups committed to resisting censorship or abridgement of free expression and free access to ideas and information.

Adopted by:
AECT Board of Directors
Kansas City
April 21, 1978

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FREEDOM TO VIEW

The FREEDOM TO VIEW, along with the freedom to speak, to hear, and to read, is protected by the First Amendment to the Constitution of the United States. In a free society, there is no place for censorship of any medium of expression. Therefore, we affirm these principles:

1. It is in the public interest to provide the broadcast possible access to films and other audiovisual materials because they have proven to be among the most effective means for the communication of ideas. Liberty of circulation is essential to insure the constitutional guarantee of freedom of expression.

2. It is in the public interest to provide for our audiences, films and other audiovisual materials which represent a diversity of views and expression. Selection of a work does not constitute or imply agreement with or approval of the content.

3. It is our professional responsibility to resist the constraint of labeling or prejudging a film on the basis of the moral, religious or political beliefs of the producer or filmmaker or on the basis of controversial content.

4. It is our professional responsibility to contest vigorously, by all lawful means, every encroachment upon the public's freedom to view.

This statement was originally drafted by the Educational Film Library Association's Freedom to View Committee, and was adopted by the EFLA Board of Directors in February, 1979. Additional copies may be obtained for 20 cent (to cover postage and handling) from: Educational Film Library Association, 43 West 61 Street, New York, New York 10023.

THIS STATEMENT WAS ADOPTED BY THE BOARD OF DIRECTORS
OF THE ASSOCIATION FOR EDUCATIONAL COMMUNICATIONS
AND TECHNOLOGY ON DECEMBER 1, 1979.
Association for Educational Communications & Technology
1025 Vermont Ave., NW, Washington, DC 20005

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PLANNING WITH TEACHERS

UNIT OF STUDY: ____________________

TEACHER: ____________________ GRADE: ____________

SUBJECT: ____________________ PERIOD: ____________

COMPETENCY GOAL(S):

OBJECTIVE(S):

RESOURCES NEEDED:

1. Print
2. Non-Print
3. Equipment

REQUEST FOR MEDIA CENTER USE:

Date: ____________________ Time Period: ____________________

PLANNING TIME:

Do you wish to arrange PLANNING TIME?

YES ______ DATE ______________ TIME ______________

NO ______

PLEASE RETURN TO MEDIA COORDINATOR BY ______________

PLANNING GUIDE FOR A MEDIA CENTER-BASED RESEARCH ASSIGNMENT

Subject: ______________________________ Topic: ________________

Teacher: ______________________ Grade ________ No. Students: ______

Starting date: __________________ Completion date: ________________

1. How are topics to be chosen by students?

2. What resources will students need?

3. What information skills will students need?

4. How are students to record information?

5. How will students present information?

6. How will students be evaluated?

7. a) Teacher responsibilities:

   b) Media Coordinator responsibilities:

STEPS IN UNIT PLANNING: A TEAMWORK APPROACH

Teacher(s) ______________________________ Grade: ________

Subject: ______________________________ Unit: ________

1. Goals:

2. Aims:

3. Objectives:
   a) Attitudes:
   b) Concepts:
   c) Skills:

4. Unit development:
   a) Persons involved:
   b) Time allotment:
   c) Unit content
   d) Resources:
   e) Teaching strategies
   f) Learning activities

5. Evaluation techniques:
   a) of the student:
   b) of the process:
   c) of the teacher and media coordinator (self-evaluation):

FLEXIBLE SCHEDULING

What is flexible scheduling?

It is a management procedure for providing services, equipment, materials and instruction in the use of the resources of the media center for as many faculty and students as need them on any particular day. It serves to integrate skills and tools of learning with the content of the curriculum.

How does flexible scheduling improve on rigid scheduling?

1. It frees the MEDIA PERSONNEL to deal with individuals, small groups, and entire classrooms according to their needs and instructional planning.
2. It frees the MEDIA FACILITY to be used as needed.
3. It encourages a better use of RESOURCES at the time of instructional need.
4. It promotes the use of the media center as an INTEGRAL part of the school's instructional program.
5. It redefines the position of the media coordinator as an invaluable member of the INSTRUCTIONAL TEAM who helps the teacher match requirements in content and skill development with available resources based on the individual needs of students.
6. It encourages students to seek information on their own, thus promoting attitudes for LIFE-LONG LEARNING.

Is so called "flexible scheduling" just another fad?

No, it has been used increasingly since the 1960's by those educators who realize the importance of alternative strategies and a variety of media to meet the needs of individuals. It continues to be recommended by the American Association of School Librarians because it allows for new kinds of media services as the need arises.

Where do you begin; do you just make an announcement and open the doors of the media center?

No, flexible scheduling cannot work unless all concerned cooperate. In other words their ATTITUDES have to be flexible first. Ground rules must be set and understood by all. The Media Advisory Commitee which represents the entire faculty can help with setting ground rules. For example, six students from one classroom at a time may comprise a small group activity; the facility cannot hold more than 10 small groups. The teachers and students must be aware of such limits. The principal, as the instructional leader of the school, sets the tone for a flexible attitude.

What is another example of a flexible attitude?

Students must not just be allowed to come to the media center; they must be encouraged by their classroom teacher to pursue interests, to browse, as well as to do classroom assignments in the media center.

Questions from teachers about flexible scheduling:

1. Will I be allowed to bring my whole class on some occasions?

   Yes, sometimes it is important for the entire class to come. For example, they might need an introduction to a certain area of resources or a demonstration of some piece of equipment. However, many of their visits will be as individuals and in small groups.

2. If I don't come to the media center each week, how can I be sure that every student is checking out a book?

   Interview students regarding their books. Require them to do something! Each teacher provides students with certain open times such as after completing classwork, during breaks, during the last 30 minutes of the day, etc. In addition the media center is open before school, during lunch periods and after school as the situation permits. Also, does checking out a book mean that the child will read it?

   Mechanisms for setting up a tacit consent system in elementary schools include color coded clothespins, three green ones for research, three red ones for book checkout, etc., or buttons with "REFERENCE", "DOING THE MEDIA", etc.

3. We are so scheduled with art, music and P.E., how can I get in the media center without a fixed schedule?

   Consider the media center to be an extension of every classroom. Using the media center is just one more strategy for reaching your instructional objective; use the many resources and the expertise of the media personnel in all subject areas.

4. Can I sign up for more than one time a week, say once for the entire class and two small groups?

   Sure, some weeks this may be necessary. Check with the media coordinator to see what time and spaces are available.

5. Do I come to the media center with my class?

   If you are needed to follow-up on a skills lesson or to help students with individual research or selections, you would want to be present when the entire class is in the media center. Small groups and individuals from your class would not warrant your presence. If you are in doubt, talk to the media coordinator.

Questions from the media coordinator:

1. Even if I believe in the philosophy of flexible scheduling, how can I plan with every teacher every week when there is no planning period anyway?

   First, establish an open circulation policy for check out and return of resources. Each teacher will not need you every week for instruction. Some teachers might come in and plan a sequence for the whole semester, then the teachers just sign their names with an indication of what is to be taught when they are ready.* Others may consult you monthly or weekly.

   * For example,

   Jones -
   VTR intro./
   L.A. production

2. Is it possible to operate a flexible scheduled media center without help?

   Paraprofessional assistance is needed to free the media coordinator to carry out professional duties. Students and volunteers may be available when paraprofessionals are not. Again, the flexible attitude will go a long way toward working out the problems you encounter when providing the expanded services inherent in a flexibly scheduled media center. The cooperation of students, faculty and principal is a vital part of the strategy for implementing flexible scheduling.

3. What if teachers don't plan with me and students are not encouraged to come to the media center?

   As a professional, it is up to you to sell your program. Ask the principal to start a curriculum TIMELINE which indicates what is planned by each teacher during a certain period of time. Based on this information, you can offer to set up interest and learning centers, make up bibliographies, suggest possible media skills which would fit into subject areas, etc.

4. What are some ways to facilitate the use of the media center when there is a need?

   TASK SHEETS written by the teacher tell why the student is visiting the media center.

   CLOTHESPINS can be color coded for an activity.

   BUTTONS with messages can also accomplish the same thing.

   SIGN UP SHEETS posted for activities, stations, zones, etc., or whatever accommodates a particular school.

Questions from the principal about flexible scheduling:

1. How can I implement a flexible schedule in my school?

   Plan with your Media Advisory Committee to set up ground rules; support the efforts of your media coordinator; set up planning periods for teachers; establish a curriculum TIMELINE so that all in the school know what is to be taught by each within a certain time frame.

2. What about the teachers that have had a library period every week since they have been teaching?

   Some teachers will continue to sign up every week for awhile; however, when they see how well others use the media center to gain an instructional advantage, they'll follow suit.

SAMPLE MEDIA CENTER SCHEDULE.

Siler City Elementary School
Media Center Schedule 1988-89

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:45 - 8:15					
8:15 - 9:00	░	░	░	░	░
9:00 - 9:30			▧		▧
9:35 - 10:05			▧		▧
10:10 - 10:40		▧	▧		▧
10:45 - 11:15	░	░	░	░	░
11:15 - 11:45	▒	▒	▒	▒	▒
11:45 - 12:15	▧	▧	▧	▧	▧
12:20 - 12:50	▧			▧	▧
12:55 - 1:25					▧
1:30 - 2:00		▧			▧
2:00 - 2:30	░	░	░	░	░
2:30 - 3:15					

☐	Scheduled Classes
░	Open Circulation By Grade Level
☐	Administrative Routines
▒	Lunch
▧	Flexible Schedule Times

(Media Coordinators and Teachers use these periods for integrated instruction. When classes are not signed to come in during these periods Media Coordinators will use this time for such activities as T.V. Production, Collection Development and Management, Selection, Center Development, Monthly Reports, Section Inventories, etc.)

Friday's schedule is set aside for integrated unit work

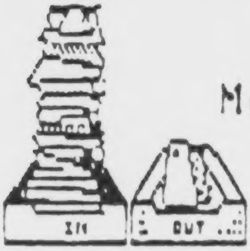
WEEK ____________________

STOUGH ELEMENTARY MEDIA CENTER

	8:30-9:05 OPEN CHECKOUT	1. 9:05-9:35 2. 9:35-10:05	1. 10:05-10:35 2. 10:35-11:05	1. 11:05-11:35 2. 11:35 12:05	1. 12:05-12:35 2. 12:35-1:05	1. 1:05-1:35 2. 1:35-2:05	1. 2:05-2:35 2. 2:35-3:05	AFTER SCHOOL
MONDAY	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS
TUESDAY	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS
WEDNESDAY	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS
THURSDAY	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS
FRIDAY	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS	CIRC REF EASY NON FICT COMPUTERS

Planning and Assessment APPENDIX

- A Media Program Planning Model B-1
- Media Program Assessment Instrument B-3



Hendersonville Jr. High
Media Program Planning Process
Outline of Steps

I. Implementation - Obtain permission from principal & form committee of teachers.

II. Define media program services alternatives.

III. Survey perceptions of current services and determine service preferences.

IV. Assess affordability and feasibility of preferred services.

V. Communicate feasible preferred services.

VI. Development of objectives.

VII. Evaluation and documentation.

Nina Matzen, Media Coordinator
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Hendersonville, N.C. 28739
(704) 692-6731

A MEDIA PROGRAM PLANNING MODEL

by Ronda Davis and Marie Washburn

1. Develop the program mission and goals.
2. Gain administrative support.
3. Define the planning process, mission, and goals.
4. Gather data through a formal survey.
5. Analyze the data, list priorities, and develop specific program objectives.
6. Determine resources and operational requirements.
7. Develop a budget.
8. Communicate the program components.
9. Implement the program.
10. Evaluate and revise the program.

MEDIA PROGRAM ASSESSMENT INSTRUMENT

LEA ______________________________ Date ____________________________

School ______________________________________ Grade Levels ____________

ADM ______________ # of Teachers __________ Principal ____________________

PURPOSE:

This self-assessment instrument is designed to identify components of the current media program in preparation for a system-wide In-Depth Survey Report with the intent of developing new goals.

DIRECTIONS:

The **building-level media coordinator(s)** should complete this report and forward it to the system-level supervisor. Check the most accurate responses, provide the requested information, and attach any supporting documents that may be helpful in learning about the operation of the media center program.

The **system-level supervisor** should return the instrument to the regional media consultant at least two weeks prior to the on-site visit.

Completed by____
(name) (position)

____
(name) (position)

PERSONNEL

_____ # of media professional(s)
- _____ full time _____ half time _____ less than half time
- _____ A certificate _____ G certificate _____ Provisional certificate

_____ # of media support personnel (employed by the school system)
- _____ full time _____ half time _____ less than half time

_____ # of adult volunteers

_____ # of student assistants

PROGRAM

YES NO

___ ___ 1. The media coordinator teaches a sequential information skills program based on the Teacher Handbook: Library Media & Computer Skills K-12.

___ ___ 2. The media coordinator plans with teachers to correlate/integrate/relate information skills instruction with other curricular units.

_____ regularly _____ occasionally

___ ___ 3. Students are evaluated periodically on information skills.

___ ___ 4. The schedule promotes use of the media center at any time.

___ ___ 5. The media coordinator develops a yearly plan which includes long- and short-range goals. If YES, please attach current plan.

___ ___ 6. The media program goals support the philosophy and mission of the school.

___ ___ 7. The media coordinator provides a literary appreciation program.

8. The principal supports a strong media program in these ways:
   - _____ appoints a Media Advisory Committee
   - _____ serves on the Media Advisory Committee
   - _____ provides planning time for teachers and the media coordinator to encourage integration of information skills into content areas
   - _____ provides an adequate budget
   - _____ other:____

9. The media coordinator communicates with the students/staff in the following ways:
   - _____ faculty meetings
   - _____ special "media" bulletins
   - _____ departmental/grade level meetings
   - _____ other: ____
   - _____ school newspaper
   - _____ informally

___ ___ 10. The media coordinator periodically conducts and/or formal, in-house staff development sessions for teachers.

RESOURCES

YES NO

___ ___ 1. A selection policy approved by the local school board guides the acquisition process.

2. The Media Advisory Committee participates in collection development by:
   - _____ setting budget priorities
   - _____ evaluating existing resources
   - _____ making recommendations for new resources
   - _____ weeding obsolete materials
   - _____ previewing AV media/software prior to purchase
   - _____ other: ____

___ ___ 3. The media coordinator maintains on up-to-date consideration file.

4. List the most frequently used selection tools.

5. All resources are:
_____ classified, cataloged, and processed by standard procedures
_____ indexed in an up-to-date card catalog/on-line catalog
_____ interfiled in the card catalog
_____ recorded in a shelf list
_____ physically inventoried at least every two years
_____ up-to-date
_____ in good repair
_____ equally accessible to teachers and students
_____ processed through the media center regardless of the funding source

6. Available resources include:
_____ up-to-date information file
_____ up-to-date community resource file
_____ access to STV programs
_____ back issues of periodicals
_____ Advisory Lists of Instructional Media
_____ computers for student use
_____ on-line database retrieval
_____ sufficient quantities of equipment to use media effectively
_____ current professional collection
_____ a balance between print/non-print
_____ STV Catalogs/Schedules/Updates
_____ a periodical index
_____ computer(s) for library management
_____ CD-ROM sources
_____ electronic mail for instructional use

YES NO
___ ___ 7. The media coordinator assists in acquisition of resources from outside the school media collection. (i.e. system-level collection, community resources, state resources)
___ ___ 8. All school staff members are familiar with the procedure for handling challenged materials.
___ ___ 9. All school staff members are aware of copyright laws which may affect their use of media.

FACILITIES

YES NO
___ ___ 1. Provision is made for easy access by handicapped users.

2. The media center is:
___ ___ convenient to instructional areas.
___ ___ large enough (main use area: 4-6 square feet per student/1600 sq. ft. minimum).
___ ___ capable of expansion.
___ ___ convenient to an outside entrance.
___ ___ adequately wired with electrical outlets.
___ ___ equipped to seat at least 40 students or 10% of the student body, whichever is greater.
___ ___ equipped with shelving of appropriate height for intended users.
___ ___ equipped with furniture appropriate for intended users.
___ ___ equipped with adequate controls for lighting.
___ ___ adequately heated.
___ ___ air conditioned.

3. The media center has the following well-defined areas:

- _____ circulation
- _____ storysharing
- _____ reference
- _____ leisure reading
- _____ large group instruction
- _____ periodicals
- _____ listening/viewing
- _____ bulletin boards/displays
- _____ other: ____
- _____ equipment storage
- _____ conference
- _____ administration/planning
- _____ production/workroom
- _____ professional collection
- _____ periodical storage
- _____ current periodicals

___ ___ 4. There is a phone jack in the media center.

___ ___ 5. Most audiovisual media is shelved in the main use area.

___ ___ 6. STV programming is received in the media center through coaxial cable or master antenna.

___ ___ 7. The media center provides a TV distribution system reaching all teaching stations.

BUDGET

1. List the amount of funds spent for resources processed through the media center from the previous year.

Books	________
Periodicals	________
AV materials	________
Computer software	________
Equipment	________
Supplies	________
Other	________
TOTALS	________

2. List the amount of funds allotted for resources for the current year and the amount spent to date.

	ALLOTTED	SPENT-TO-DATE
Books	________	________
Periodicals	________	________
AV materials	________	________
Computer software	________	________
Equipment	________	________
Supplies	________	________
Other	________	________
TOTALS	________	________

SYSTEM-LEVEL

YES NO

___ ___ 1. The school system has a certified media supervisor.

2. The system-level services include:

_____ professional collection
_____ centralized processing
_____ 16mm film collection
_____ video collection
_____ MECC membership/duplication
_____ equipment repair
_____ AV equipment loan
_____ production services
_____ duplication of STV programs
_____ other: ______________________________

___ ___ 3. The system-levle supervisor plans and implements staff development activities with and for school media coordinators.

4. The system-level supervisor involves media coordinators in planning the following:

_____ use of STV
_____ use of newer technologies
_____ new and/or renovated facilities
_____ use of federal funds
_____ a comprehensive media program
_____ collection development
_____ other: ______________________________

MISCELLANEOUS

1. Briefly list program improvements begun in the last few years.

2. Briefly list goals for the future.

3. Describe plans for incorporating technology in the school.

4. Comments: (continue on the back as needed)

rd
8/90

Resources APPENDIX

- Points to Consider in Evaluating Media C-1
- Media Costs, 1987-1990 C-4
- State Contract Purchasing Procedures C-5
- Selection Aids C-7
- Maintaining the Collection-Inventory C-13
- Weeding the Media Collection C-16
- Copyright Issues for Educators C-20
- Duplication of Copyrighted Materials C-33
- Regional Resources Standards C-40
- Maps and Globes C-42

POINTS TO CONSIDER IN EVALUATING MEDIA

CONTENT

Strengths	Weaknesses
• Information correct, appropriate, useful, and worthwhile	• Information inaccurate, inappropriate, extraneous or lacking true merit
• Pertinent to school's curriculum	• Irrelevant to school's curriculum
• Vocabulary at user's level	• Vocabulary too easy or too difficult
• Titles, captions, etc. clarify and illustrate	• Titles, captions, etc. confuse and misrepresent

ORGANIZATION

Strengths	Weaknesses
• Information easy to identify and locate	• Information haphazardly arranged, difficult to locate
• Logical development	• Confused development
• Appropriate emphasis and reinforcement	• Lack of emphasis or excessive repetition
• Suitable, challenging pace	• Frustrating speed or distracting lags
• Relevance of all sequences	• Unrelated sequences
• Balanced use of narration and dialogue; points and illustrations; special features	• Unsatisfactory use of these elements

OBJECTIVITY

Strengths	Weaknesses
• Fair depiction of opposing views	• Slanted depiction of opposing views
• Sensitivity toward feelings of different races, creeds, and special groups	• Insensitivity toward feelings of a particular group
• Responsible vocabulary	• Emotionally charged vocabulary
• Factually supported	• Value judgments, generalizations, stereotypes

SCOPE

Strengths	Weaknesses
• Comprehensive coverage within specific, realistic limits	• Coverage too broad
	• Coverage too limited
	• Gaps in coverage
• Appropriate scope for designated grade level	• Too comprehensive or too limited for grade level

AUTHENTICITY

Strengths	Weaknesses
• Accurate facts	• Inaccurate facts
• Up-to-date information	• Obsolete information; a "fake" revised version

APPEAL

Strengths	Weaknesses
• Intellectually challenging	• Undemanding content
• Imaginative presentation	• Pedestrian and predictable approach
• Human appeal (appropriately sympathetic, adventurous, spritely, etc.)	• Detached tone (flat, impersonal, or mechanical)
• Credibility	• Implausibility

FORMAT

Strengths	Weaknesses
• Clear, attractive format that enhances presentation of information	• Cluttered format that confuses presentation of information
• Good use of the format's special properties	• Poor use of the format's special properties

CONSTRUCTION

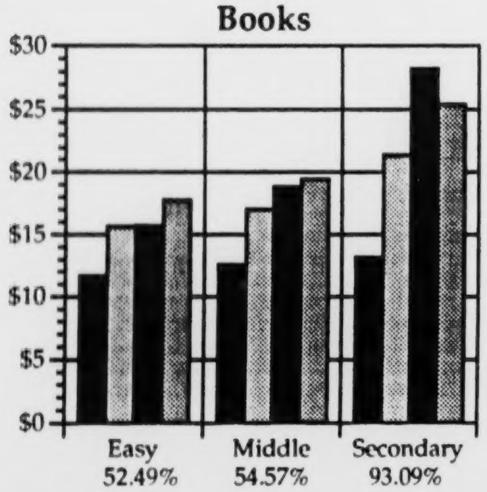
Strengths	Weaknesses
• Durability	• Flimsy construction
• Manageability	• Difficult to use

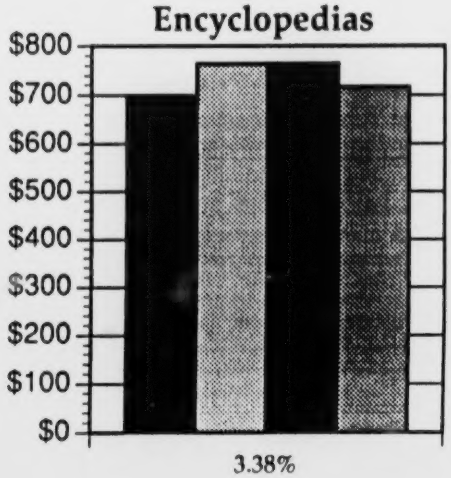
USES

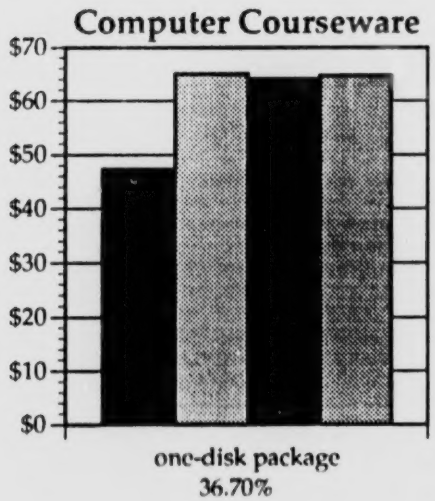
- Individual use
- Group use (small or large)
- Introduction
- Summary
- Browsing
- Independent study
- Teacher use
- Reinforcement
- Enrichment

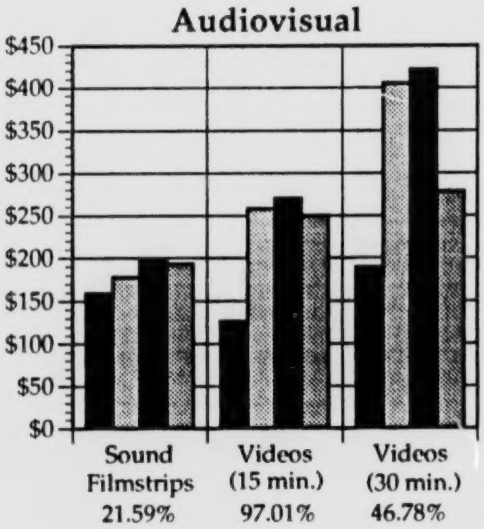
Media Costs *
1987 - 1990

With Percentage of Increase









* Based on prices of materials received by Media Evaluation Center for review

STATE CONTRACT PURCHASING PROCEDURES

The Department of Administration, through the Division of Purchase and Contract, is charged with jurisdiction and control over the specifications and purchase of equipment, materials, supplies, and services required by all agencies of State Government with the exception of certain specific items such as textbooks.

Under the requirements of General Statute 115C-522, it is the duty of local boards of education to purchase all equipment in accordance with contracts made by or with the approval of Purchase and Contract.

ITEMS ON CONTRACT:

Local school systems may purchase any item on State Contract directly from the specified vendor and expect to receive the discounted price, warranty, service, etc. as applicable to the particular item. Certification numbers for the various state media contracts follow:

State Media Contracts	Certification Number
Audiovisual Equipment	880
Audiovisual Stands and Cabinets	880-70
Closed Circuit Television	840
Computer Furniture	408
Electric Lamps	285-50
Facsimile Machines	725-55
Library Bindings	130
Microcomputers	250-15
Microfiche	575-65
Photographic Equipment and Supplies	655
Sound Recording and Reproduction Sound Equipment, Etc.	480-82
Transparency Making Equipment and Supplies	880-90

ITEMS NOT ON CONTRACT:

Under the requirements of G.S. 143-53 and Section 513.0404 of THE NORTH CAROLINA ADMINISTRATIVE CODE, all equipment, materials and supplies not covered by state contracts and costing ***less than $10,000*** may be purchased without the approval of the Office of Purchase and Contract as long as normal purchasing requirements set forth in THE PURCHASING MANUAL are followed. Non-contract items ***over $10,000*** must be sent to the Division of Purchase and Contract for formal bidding as required by statute.

TEACHER BUY PROGRAM:

North Carolina teachers may purchase microcomputer equipment from Section A of the State Microcomputer Contract (#250-15) at the same price that schools pay. The program is called the North Carolina Teacher Buy Program. System-level computer coordinators have the forms to be completed as well as the purchasing procedures to follow for this popular program.

SPECIAL NOTE:

Local school systems may receive permission to purchase items that cost under $10,000 ***in lieu of*** an item that is on state contract if the particular item is one that requires compatibility with equipment already owned. Prior to purchase of the item, proof of the items' current ownership must be furnished by the school system to the Division of Purchase and Contract.

SELECTION AIDS

BOOKS

A TO ZOO: SUBJECT ACCESS TO CHILDREN'S PICTURE BOOKS. 3rd ed. $44.95. Bowker, 1989. (ISBN 0-8352-2599-2) (PreK-Grade 2) **B**

AAAS SCIENCE BOOK LIST, 1978-1986. $25. AAAS, 1986. (ISBN 0-87168-313-6) (Grades 6-12) **B Pb**

ACCEPT ME AS I AM: BEST BOOKS OF JUVENILE NONFICTION ON IMPAIRMENTS AND DISABILITIES. $34.95. Bowker, 1985. (ISBN 0-8352-1974-7) (PreK-Grade 12) **B**

ADVENTURING WITH BOOKS: A BOOKLIST FOR PRE-K-GRADE 6. 9th ed. $16.50 paper. NCTE, 1989. (ISBN 0-8141-0078-3) (PreK-Grade 6) **B**

AMERICA AS STORY: HISTORICAL FICTION FOR SECONDARY SCHOOLS. $15 paper. ALA, 1988. (ISBN 0-8389-0492-0) (Grades 6-12) **B**

AMERICAN HISTORY FOR CHILDREN AND YOUNG ADULTS: AN ANNOTATED BIBLIOGRAPHIC INDEX. $32.50. Libs. Unl., 1990. (ISBN 0-87287-731-0) (Grades K-12) **B**

BEST BOOKS FOR CHILDREN: PRESCHOOL THROUGH GRADE 6. 4th ed. $44.95. Bowker, 1990. (ISBN 0-8352-2668-9) (PreK-Grade 6) **B**

BEST BOOKS FOR JUNIOR HIGH READERS. $44.95. Bowker 1991. (ISBN 0-8352-3020-1) (Grades 7-9) **B**

BEST BOOKS FOR SENIOR HIGH READERS. $44.95. Bowker, 1991. (ISBN 0-8352-3021-X) (Grades 9-12) **B**

BEST ENCYCLOPEDIAS: A GUIDE TO GENERAL AND SPECIALIZED ENCYCLOPEDIAS. $39.50. Oryx Pr., 1986. (ISBN 0-89774-171-4) (PreK-Grade 12) **B**

THE BEST: HIGH/LOW BOOKS FOR RELUCTANT READERS. $12.50 paper. Libs. Unl., 1990. (ISBN 0-87287-532-6) (Grades 3-12) **B**

THE BEST SCIENCE BOOKS AND A-V MATERIALS FOR CHILDREN. $20. AAAS, 1988. (ISBN 0-87168-316-4) (Grades K-9) **AV B**

BEYOND PICTURE BOOKS: A GUIDE TO FIRST READERS. $39.95. Bowker, 1989. (ISBN 0-8352-2515-1) (Grades 1-3) **B**

BOOK BAIT: DETAILED NOTES ON ADULT BOOKS POPULAR WITH YOUNG PEOPLE. 4th ed. $12 paper. ALA, 1988. (ISBN 0-8389-0491-2) (Grades 7-9) **B**

THE BOOKFINDER: WHEN KIDS NEED BOOKS. VOLUME 4: ANNOTATIONS OF BOOKS PUBLISHED 1983 THROUGH 1986. $34.95 paper. Am. Guidance, 1989. (ISBN 0-913476-51-X) (PreK-Grade 12) **B**

BOOKS FOR CHILDREN TO READ ALONE: A GUIDE FOR PARENTS AND LIBRARIANS. $39.95. Bowker, 1988. (ISBN 0-8352-2346-9) (PreK-Grade 3) **B**

BOOKS FOR THE GIFTED CHILD, VOLUME 2. $39.95. Bowker, 1988. (ISBN 0-8352-2467-8) (PreK-Grade 6) **B**

BOOKS FOR YOU: A BOOKLIST FOR SENIOR HIGH STUDENTS. 10th ed. $13.95 paper. NCTE, 1988. (ISBN 0-8144-0364-2) (Grades 10-12) **B**

BOOKS KIDS WILL SIT STILL FOR: THE COMPLETE READ-ALOUD GUIDE. 2nd ed. $34.95. Bowker, 1990. (ISBN 0-8352-3010-4) (PreK-Grade 6) **B Pb**

BOOKS TO HELP CHILDREN COPE WITH SEPARATION AND LOSS: AN ANNOTATED BIBLIOGRAPHY. VOLUME 3. $39.95. Bowker, 1989. (ISBN 0-8352-2510-0) (PreK-Grade 11) **B Pb**

CHILDREN'S CATALOG. 15th ed. (Includes 4 annual supplements) $72. Wilson, 1986. (ISBN 0-8242-0743-2) (PreK-Grade 7) ***B Pb***

CHOOSING BOOKS FOR CHILDREN: A COMMONSENSE GUIDE. Rev. ed. $9.95 paper. Delta, 1990. (ISBN 0-385-30108-1) (PreK-Grade 7) **B Pb Pj**

CURRENT ISSUES RESOURCE BUILDER: FREE AND INEXPENSIVE MATERIALS FOR LIBRARIANS AND TEACHERS. $19.95 paper. McFarland & Co., 1989. ((ISBN 0-89950-388-8) (Grades K-12) **AV B P S**

THE ELEMENTARY SCHOOL LIBRARY COLLECTION: A GUIDE TO BOOKS AND OTHER MEDIA. 17th ed. $99.95. Brodart, 1990. (ISBN 0-87272-094-2) (PreK-Grade 6) **AV B P Pb S**

EYEOPENERS! HOW TO CHOOSE AND USE CHILDREN'S BOOKS ABOUT REAL PEOPLE, PLACES, AND THINGS. $9.95 paper. Viking Penguin, 1988. (ISBN 0-14-046830-7) Grades K-9) **B**

FANTASY LITERATURE FOR CHILDREN AND YOUNG ADULTS: AN ANNOTATED BIBLIOGRAPHY. 3rd ed. $39.95. Bowker, 1989. ((ISBN 0-8352-2347-7) Grades 3-12) **B Pb**

FOR READING OUT LOUD! A GUIDE TO SHARING BOOKS WITH CHILDREN. Rev. ed. $16.95. Delacorte, 1988. (ISBN 0-385-29660-6) (PreK-Grade 8) **B**

GROWING PAINS: HELPING CHILDREN DEAL WITH EVERYDAY PROBLEMS THROUGH READING. $17.50 paper. ALA, 1988. (ISBN 0-8389-0469-6) (PreK-Grade 8) **B**

GUIDE TO REFERENCE BOOKS FOR SCHOOL MEDIA CENTERS. 3rd ed. $36. Libs. Unl., 1986. (ISBN 0-87287-545-8) (Grades K-12) **B**

HIGH INTEREST--EASY READING: FOR JUNIOR AND SENIOR HIGH SCHOOL STUDENTS. 5th ed. $7.95 paper. NCTE, 1988. ((ISBN 0-8141-2097-0) (Grades 7-12) **B**

HIGH/LOW HANDBOOK: ENCOURAGING LITERACY IN THE 1990s. 3rd ed. $39.95. Bowker, 1990. (ISBN 0-8352-2804-5) (Grades 7-12) **B P S**

JUNIOR HIGH SCHOOL LIBRARY CATALOG. 6th ed. (Includes 4 annual supplements) $105. Wilson, 1990. (ISBN 0-8242-0799-8) (Grades 6-9) B

LITERATURE-BASED READING: CHILDREN'S BOOKS AND ACTIVITIES TO ENRICH THE K-5 CURRICULUM. $29.95 paper. Oryx Pr., 1990. (ISBN 0-89774-562-0) Grades K-5) **B**

LITERATURE FOR TODAY'S YOUNG ADULTS. 3rd ed. $29.95. Scott F, 1989. (ISBN 0-673-38400-4) (Grades 7-12) **B**

MAGAZINES FOR CHILDREN: A GUIDE FOR PARENTS, TEACHERS, AND LIBRARIANS. 2nd ed. $20 paper. ALA, 1991. (ISBN 0-8389-0552-8) (PreK-Grade 8) **P**

MAGAZINES FOR LIBRARIES. 6th ed. $124.95. Bowker, 1989. (ISBN 0-8352-2632-8) (PreK-Grade 12) **P Pj**

MAGAZINES FOR YOUNG PEOPLE. 2nd ed. $49.95. Bowker, 1991. (ISBN 0-8352-3009-0) (PreK-Grade 12) **P Pj**

MOTHER GOOSE COMES FIRST: AN ANNOTATED GUIDE TO THE BEST BOOKS AND RECORDINGS FOR YOUR PRESCHOOL CHILD. $14.95 paper. H. Holt & Co., 1990. (ISBN 0-8050-1001-7) (PreK-Grade 1) **AV B**

THE MUSEUM OF SCIENCE AND INDUSTRY BASIC LIST OF CHILDREN'S SCIENCE BOOKS. $11.95 paper. ALA, 1988. (ISBN 0-8389-0499-8) (PreK-Grade 9) **B P Pb Pj**

NONFICTION FOR YOUNG ADULTS: FROM DELIGHT TO WISDOM. $32.50 paper. Oryx Pr., 1990. (ISBN 0-89774-555-8) (Grades 7-12) **B**

ONLY THE BEST, 1985-1989: THE CUMULATIVE GUIDE TO HIGHEST-RATED EDUCATIONAL SOFTWARE, PRESCHOOL-GRADE 12. $49.95. Bowker, 1989. (ISBN 0-8352-2851-7) (PreK-Grade 12) **S**

ONLY THE BEST, 1990: THE ANNUAL GUIDE TO HIGHEST-RATED EDUCATIONAL SOFTWARE, PRESCHOOL-GRADE 12. $26.95. Bowker, 1989. (ISBN 0-8352-2766-9) (PreK-Grade 12) **S**

ONLY THE BEST, 1991: THE ANNUAL GUIDE TO HIGHEST-RATED EDUCATIONAL SOFTWARE, PRESCHOOL-GRADE 12. $29.95. Bowker, 1990. ((ISBN 0-8352-2952-1) PreK-Grade 12) **S**

PICTURE BOOKS FOR CHILDREN. 3rd ed. $25 paper. ALA, 1990. (ISBN 0-8389-0527-7) (PreK-Grade 8) **B**

RECOMMENDED REFERENCE BOOKS FOR SMALL AND MEDIUM-SIZED LIBRARIES AND MEDIA CENTERS. $37. Libs. Unl., 1990. (ISBN 0-87287-826-0) (N/A) **B**

REFERENCE BOOKS FOR YOUNG READERS: AUTHORITATIVE EVALUATIONS OF ENCYCLOPEDIAS, ATLASES, AND DICTIONARIES. $49.95. Bowker, 1988. (ISBN 0-8352-2366-3) (PreK-Grade 12) **B**

THE SCHOOL LIBRARIAN'S SOURCEBOOK. $34.95. Bowker, 1990. (ISBN 0-8352-2711-1) (N/A) **AV Pb Pj S**

SCIENCE & TECHNOLOGY IN FACT AND FICTION: A GUIDE TO CHILDREN'S BOOKS. $35. Bowker, 1990. (ISBN 0-8352-2708-1) (PreK-Grade 6) **B Pb**

SCIENCE & TECHNOLOGY IN FACT AND FICTION: A GUIDE TO YOUNG ADULT BOOKS. $35. Bowker, 1990. (ISBN 0-8352-2710-3) (Grades 5-12) **B**

SENIOR HIGH SCHOOL LIBRARY CATALOG. 13th ed. (Includes 4 annual supplements) $96. Wilson, 1987. (ISBN 0-8242-0755-6) (Grades 9-12) **B**

SUBSTANCE ABUSE: A RESOURCE GUIDE FOR SECONDARY SCHOOLS. $28.50. Libs. Unl., 1991. (ISBN 0-87287-805-8) (Grades 6-12) **AV B P S**

YOUR READING: A BOOKLIST FOR JUNIOR HIGH AND MIDDLE SCHOOL STUDENTS. 7th ed. $13.95 paper. NCTE, 1988. (ISBN 0-8141-5939-7) (Grades 5-9) **B**

ABBREVIATIONS

AV - Audiovisual (audiocassettes, films, filmstrips, videocassettes, etc.)

B - Books

Pb - Professional books

P - Periodicals

Pj - Professional journals

S - Software

CD-ROM - Compact Disc-Read Only Memory

DIRECTORY

AAAS - American Association for the Advancement of Science, Marketing Department, 1333 H Street NW, Washington, D.C. 20005

ALA - American Library Association, 50 East Huron Street, Chicago, Illinois 60611

Am. Guidance - American Guidance Service, Inc., Publishers' Building, Circle Pines, Minnesota 55014-1796

Bowker - R.R. Bowker Company, Order Department, P.O. Box 31, 121 Chanlon Road, New Providence, New Jersey 07974

Brodart - Brodart Company, 500 Arch Street, Williamsport, Pennsylvania 17705

Delacorte - Delacorte Press, 666 Fifth Avenue, New York, New York 10103

Delta - Delta Books, 666 Fifth Avenue, New York, New York 10103

H. Holt & Co. - Henry Holt & Company, Inc., 115 West 18th Street, New York, New York 10011

Libs. Unl. - Libraries Unlimited, P.O. Box 3988, Englewood, Colorado 80155-3988

McFarland & Co. - McFarland and Company, Inc., Publishers, Box 611, Jefferson, North Carolina 28640

NCTE - National Council of Teachers of English, 1111 Kenyon Road, Urbana, Illinois 61801

Oryx Pr. - Oryx Press, 2214 North Central Avenue at Encanto, Phoenix, Arizona 85004-1483

Scott F - Scott, Foresman and Company, 1955 Montreal Road, Tucker, Georgia 30084

Viking-Penguin - Viking Penguin, 375 Hudson Street, New York, New York 10014-3657

Wilson - The H.W. Wilson Company, 950 University Avenue, Bronx, New York 10452

PERIODICALS

THE BOOK REPORT: THE JOURNAL FOR JUNIOR AND SENIOR HIGH SCHOOL LIBRARIANS. Bimonthly September-May. $39. Linworth Publishing, Inc., 5701 N. High St., Suite One, Worthington, OH 43085 **AV B Pb S CD-ROM**

BOOKLIST. Twice monthly September-June (except monthly July and August). $56. American Library Association, 50 E. Huron St., Chicago, IL 60611 **AV B S**

BULLETIN OF THE CENTER FOR CHILDREN'S BOOKS. Monthly (except August). $24. The University of Chicago Press, P.O. Box 37005, Chicago, IL 60637 **B**

CD-ROM LIBRARIAN. Monthly (except for a combined issue July/August). $79.50. Meckler Corporation, 11 Ferry Lane West, Westport, CT 06880 **CD-ROM**

CHILDREN'S VIDEO REVIEW NEWSLETTER. Bimonthly June-April. $36. Children's Video Review Newsletter, 110 Lena Court, Grass Valley, CA 95949-9979 **AV**

THE COMPUTING TEACHER. Monthly August-May (except for combined issues August/September and December/January). $47. International Society for Technology in Education (ISTE), 1787 Agate St., Eugene, OR 97403-1923 **S**

ELECTRONIC LEARNING. Monthly September-April (except for combined issues November/December and May/June). $23.95. Scholastic Inc., 351 Garver Rd., Monroe, OH 45050-2700 **S**

THE HORN BOOK MAGAZINE. Six times a year in January, March, May, July, September, and November. $38. The Horn Book, Inc., 14 Beacon St., Boston, MA 02108 **B**

THE HORN BOOK GUIDE TO CHILDREN'S AND YOUNG ADULT BOOKS. Twice a year in March and September. $50. (One-year subscription to both the Guide and The Horn Book Magazine, $60.) The Horn Book, Inc., 14 Beacon St., Boston, MA 02108 **B**

INCIDER/A+. Monthly. $27.97. IDG Communications, 80 Elm St., Peterborough, NH 03458 **S**

KIRKUS REVIEWS. Twice monthly. $75. Kirkus Reviews, 200 Park Avenue South, New York, NY 10003 **B**

MACWORLD: THE MACINTOSH MAGAZINE. Monthly. $30. Macworld Communications, Inc., 501 Second St., San Francisco, CA 94107 **S CD-ROM**

PUBLISHERS WEEKLY. Weekly (except the last week in December and additional issues in January, February, and August). $119. Publishers Weekly, P.O. Box 1979, Marion, OH 43306 **B**

SCHOOL LIBRARY JOURNAL. Monthly January-December. $63. School Library Journal, P.O. Box 1978, Marion, OH 43305-1978 **AV B Pb P S**

SCIENCE BOOKS AND FILMS. Monthly (except January, July, and August). $35. American Association for the Advancement of Science, 1333 H St., Washington, DC 20005 **AV B Pb S**

TECHNOLOGY AND LEARNING. (Formerly Classroom Computer Learning) Monthly (except June, July, August, and December). $24. Peter Li, Inc., 2451 E. River Rd., Dayton, OH 45439 **S**

VOICE OF YOUTH ADVOCATES (VOYA). Bimonthly April-February. $32.50. Scarecrow Press, Inc., 52 Liberty St., Metuchen, NJ 08840 **AV B Pb**

WILSON LIBRARY BULLETIN. Monthly (except July and August). $46. The H.W. Wilson Company, 950 University Ave., Bronx, NY 10452 **AV B Pb P S CD-ROM**

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MAINTAINING THE COLLECTION
--INVENTORY--

Why Inventory

- Helps assure more appropriate selections by identifying weak areas or gaps in the collection
- Helps assess the extent to which students and teachers are provided a wide variety of resources suitable to different learning styles and curriculum areas
- Helps identify resources that need minor repairs or those that should be discarded (physical deterioration; outdated or inaccurate materials; duplicate copies)

When to Inventory

Under ordinary circumstances, once every two years is frequent enough to physically inventory each item of media. The inventory statistics can then be updated at the end of each subsequent year through regular methods of recordkeeping. (That is, by adding the number of items put into the collection and by subtracting the number of items removed from the collection during the year.) The number of items which have been lost will be determined only when physical inventory is made.

Inventory can also be performed throughout the year or over a two to three year period by rotating sections that will be examined. This process can take place while materials are being circulated.

Automated circulation systems allow media collections to be inventoried quickly and accurately. Barcode scanners are used to record items on shelves for comparison with an electronic database of the center's holdings. Physical examination of materials for repair and/or discarding take place throughout the year rather than in conjunction with inventory.

Media equipment should be inventoried at the beginning and/or end of each school year. It may be convenient to check at the same time to be sure that each item is in operative condition. In any case, preventive maintenance should be conducted on each item periodically.

At no time should the school's media center be closed when school is in session. A media center which is closed while the school's teaching/learning activities continue is certainly not in the mainstream of the instructional program.

How to Conduct Rotating Inventories Using a Shelflist

- Use student assistants, parent volunteers, and or media aides to inventory one section of materials at a time.

- Since each item of material owned by the school should be recorded on a shelflist card, the shelflist serves as the inventory control record. When a section of materials is inventoried, the shelflist card of each item not on the shelf or in circulation can be signaled with a special tab.

- At the end of the year when all the materials have been returned and placed in order, the tabbed shelflist cards are checked against the shelf to determine which items are missing or lost.

- One card for each item of equipment should be maintained in a file to serve as the equipment inventory control record and the record of repairs and preventive maintenance. The equipment inventory process may be divided into manageable units by dividing the school into sections. Many persons, including teachers to whom the equipment may be assigned, can be enlisted to assist in accounting for all items.

How to Maintain Statistics Using a Shelflist

Recording Additions

- Prepare a 3 x 5 card for each type of material. Place the card in the shelflist drawer in front of the listings.

  > *Exception: An inventory card for each type of material should be placed together at the beginning of the shelflist if a media center follows the practice of shelving all formats of materials together by subject.*

- Each time items are added to the collection, enter on the proper card the number of items and the date added. At the end of the year, total the number of items added to the collection during that year.

Recording Withdrawals

- Prepare a second 3 x 5 card for each type of material to record the number of items withdrawn from the collection. "Withdrawn" here refers to those items that are permanently discarded and those items that are lost. Some media centers choose to count a lost item permanently withdrawn only after it has been missing for two years.

- Each time items are permanently discarded, record on the proper card the number of items and the date discarded.

- At the end of the year, total the number of items withdrawn (including lost) during the year.

- Use inventory statistics for the end of the previous year and add or subtract as appropriate to update the statistics.

The purpose of this guide is to suggest clear, concise procedures for obtaining a reasonably accurate inventory. It is a wise practice to limit the investment of time and energy directed toward this task in order to direct energies toward a greater priority--facilitating learning.

WEEDING THE MEDIA COLLECTION

SIGNALS THAT CAN ALERT YOU TO A RESOURCE THAT MIGHT BE READY FOR DISCARD:

PHYSICAL CONDITION

- Antiquated appearance
- Poor binding
- Poor print (small, dull, faded print; cramped margins; faded illustrations; thin paper which allows print to show through)
- Poor technical quality (faded, off-color visuals; faulty, inferior sound)
- Worn out (dirty, brittle, torn, yellow pages; missing pages; frayed bindings; broken backs; dirty covers/scratched; warped; torn)

CONTENT

- Out-of-date information (encyclopedias over 10 years; some non-fiction over 10 years; magazines over 3-5 years)
- Inaccurate information
- Poorly written or presented information
- Better editions are available
- Unnecessary subject matter with little application to school curriculum or student interest
- Unsuitable subject or treatment not suitable to school population (illustrations outmoded or perpetuate sexual, racial, or cultural stereotypes)

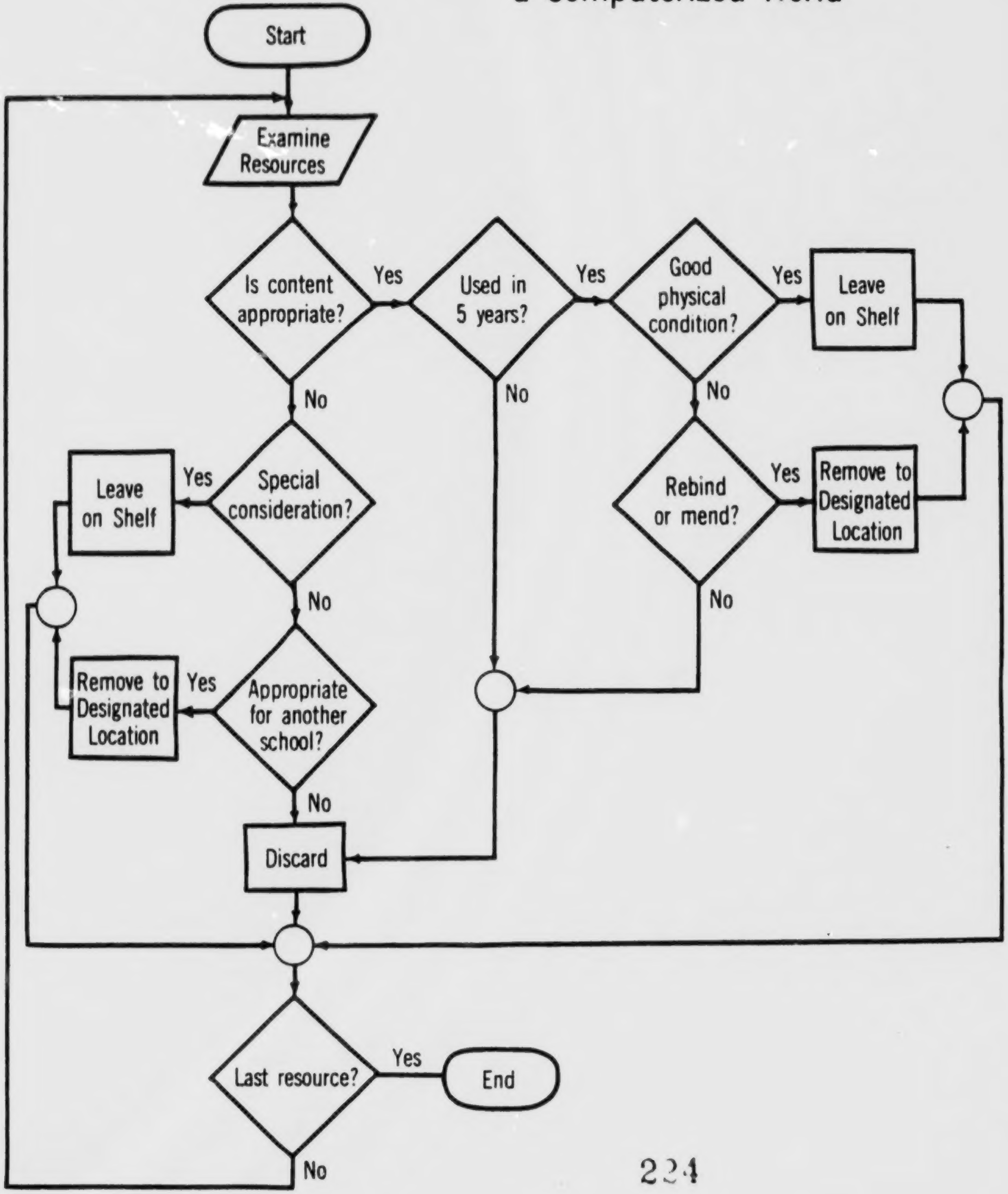
USE

- Not circulated in 3-5 years

OTHERS

- Almanacs and yearbooks which have been superseded
- Textbook types
- Periodicals not indexed
- Incomplete sets of reference books
- Duplicates of little used materials

The Weeding Process in a Computerized World


Start
Examine Resources
Is content appropriate?
Yes
No
Used in 5 years?
Yes
No
Good physical condition?
Yes
No
Leave on Shelf
Rebind or mend?
Yes
No
Remove to Designated Location
Special consideration?
Yes
No
Leave on Shelf
Appropriate for another school?
Yes
No
Remove to Designated Location
Discard
Last resource?
Yes
End
No

WHAT HAPPENS TO RESOURCES AFTER WEEDING?

BOOKS TO BE REBOUND

1. Rebind, if cover is loose, shabby or sections of book are loose, and if content is in demand and is worth preserving. Pages should be intact (may copy page on copying machine and insert) with good margins and print. Do not bind if a new copy can be purchased at about the same cost as binding. Consider buying a paperback copy.

2. Books to be rebound should have paper in good condition. (Test corner of back page. Fold one crease two times. If it does not break off, paper is probably good enough.)

3. Prepare books according to bindery directions. Place in boxes. Flag shelflist cards. Catalog cards remain in card catalog.

BOOKS TO BE MENDED

1. Minor mends only (10-15 minutes per book at the most). Do not mend a book which ought to be discarded or replaced -- time is costly.

2. Mend good titles which are irreplaceable (out-of-print or very expensive).

RESOURCES TO BE MOVED TO ANOTHER SCHOOL

1. Up-to-date materials in good physical condition only. Have media coordinator from receiving school make decisions before materials are moved.

2. Shelflist card and all catalog cards should be banded together and placed in boxes with corresponding materials. Tie or tape box shut. Indicate destination and contents on outside.

RESOURCES FOR DISCARD

1. Remove cards, pockets and date due slip.

2. Mark with "DISCARD" stamper.

3. Shelflist and catalog cards should be removed and discarded unless there are duplicate titles remaining in the collection. (Cards may be kept for those items which will be reordered.)

4. Follow county weeding policy for disposal.

SOME ITEMS WHICH MAY BE KEPT EVEN IF THEY MEET ALL WEEDING CRITERIA:

- Historically significant work of literature which cannot be replaced
- Unusual illustration or illustrations done by a well-known artist
- Work by a local author or illustrator
- Description of local history or personality

WEEDING IS A JUDGEMENTAL PROCESS. IT SHOULD BE DONE AS OBJECTIVELY AS POSSIBLE. CONSIDERATION SHOULD BE GIVEN TO:

- curriculum
- student interests
- teaching methods
- learning styles
- community
- established standards

Copyright Issues For Educators
Introduction

[Compiled and written by Dr. David Bryant, Superintendent, Reidsville City Schools and Joy Latta, Media Supervisor, Reidsville City Schools.]

No public law is likely to be violated more by educators in the course of a school day than Title 17 of the United States Code, the current version of the federal copyright laws. There is seldom malicious intent and, frequently, tight budgets are used to justify the violations. Regardless of the reason, educators must become more familiar with the requirements and limitations of the copyright law, since every violation may subject the violator to fines of up to $10,000 for each occurrence.

The media coordinator is the school employee in the best position to inform the rest of the staff of the appropriate rules to be followed in complying with the law. Media coordinators subscribe to publications rich in copyright interpretations and frequently receive government mailings from agencies like the Division of Media and Technology Services, NCDPI, which inform them of new rules or laws passed by the Congress. The school library media center is also generally the distribution point for various classroom media, such as videotapes, audiocassettes, computer software, and school photocopy and duplicating machines, the most likely targets for infringement.

Media coordinators must be careful, on the other hand, not to "police" the law in their schools. The school's administration, local school board policies, and faculty committees, such as the school's Media Advisory Committee, can keep the coordinator from playing an enforcement role for copyright law and can help maintain the balance needed to inform without threatening.

Efficient media coordinators should develop effective check-out systems that provide an opportunity for users to certify that no copyright laws will be deliberately broken while that specific resource is being used. They will also inform their staffs and administrators about what is allowable and what is not.

There are seven categories of resources that are included in the law, most of these resources and their use are applicable to public schools:

(1) Literary works
(2) Musical works, including any accompanying words
(3) Dramatic works, including any accompanying music
(4) Pantomimes and choreographic work
(5) Pictorial, graphic, and sculptural works
(6) Motion picture and other audiovisual works
(7) Sound recording

Although computer programs are not specifically covered by the law, users should take a broad interpretation of all the categories with software fitting into the literary, pictorial, or audiovisual categories.

What follows is an update for the media coordinator about information on copyright current in 1991.

Guidelines for Printed Matter

Since the 1960's when photocopying equipment began to be more sophisticated, many problems concerning copyright abuse have surfaced. We will highlight certain aspects of the copyright law that relate to printed matter; however, since there is so much written on the subject, it will be impossible to give illustrations for every situation.

Certain kinds of documents may be copied without restriction. Published works which were never copyrighted, published works whose copyrights have expired, and U.S. Government publications (not to include works published by others who received U.S. Government grants or contracts) may be copied at the discretion of the user.

The "Fair Use" interpretation of copyright law allows reproduction of copyrighted material for educational and scholarly use and is permitted for purposes of criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research. In the interpretation of "fair use," the following factors should be considered:

The purpose of use, e.g., commercial vs. educational
The nature of the copyrighted work
The amount of the work copied in relation to the work as a whole
The effect of the use on the potential market for, or value of, the work

A good rule of thumb is: if copying is just to save money, chances are it violates the "fair use" interpretation.

Guidelines for single copies by educators for scholarly research, use in teaching, or in preparing to teach, include:

A chapter from a book
An article from a newspaper or periodical
A short story, short essay, or poem
A chart, graph, diagram, drawing, cartoon, or picture from a book, periodical, or newspaper.

These guidelines also indicate the degree of **brevity** which is considered acceptable for multiple copies (one copy per student). Other fair use conditions which must be met include **spontaneity** and **cumulative effect**.

Spontaneity is copying at the instance and inspiration of the teacher; that is, the time between the decision to use the work for maximum teaching effectiveness and the use of the material is so close that a reply to a permission request would not be received before use.

Cumulative effect refers to the maximum application of fair use that may be made over a period of time. In most cases, more than two or three uses is considered beyond the scope of fair use.

Any time that materials are copied, permission should be requested from the copyright holder, even if the materials copied fall under the fair use standard. If permission is later denied, the copied works can be destroyed. If approved, however, the user may keep the materials for as long as the permission is in effect.

Certain prohibitions include: (1) copying to create or replace anthologies, compilations, or collective works; (2) copying "consumables" (workbooks, standardized tests, etc.); (3) copying to substitute for purchase; (4) copying directed by a higher authority; (5) copying for repeated use; or (6) copying for profit.

Libraries/librarians must look at additional guidelines regarding photocopy and interlibrary loan arrangements. Systematic photocopying of copyrighted materials is prohibited, but interlibrary loan arrangements, which do not have the intent of making copies in such numbers as to substitute for purchase, are permitted.

The copyright laws also provide for specific instances where libraries and librarians may reproduce a single copy of a copyrighted work if:

(1) The reproduction and circulation of the copy is made without any purpose, direct or indirect, for commercial advantage;

(2) The collections are (a) open to the public or (b) available not only to researchers affiliated with the library or institution, but any other persons doing research in a specialized field; and

(3) The reproduction or distribution of the work includes the copyright notice.

Photocopies may be placed on reserve in the library by a teacher as long as general copyright guidelines are followed. The reserve room is considered to be an extension of the classroom and these standards apply to the reserve room.

When a library offers copies either as self-service or staff-served, a notice must be displayed that states the copyright law on photocopying. A notice must also appear on copying request forms as well as on the reproductions. The librarian and/or staff cannot knowingly assist a patron in making illegal copies.

When the criteria for reproducing material cannot be met, then it is necessary to obtain written permission from the publisher. The request for permission to copy must include:

- Title, author and/or editor, and edition of materials to be duplicated
- Exact material to be used, giving amount, page numbers, chapters and, if possible, a photocopy of the material
- Number of copies to be made
- Use to be made of duplicated materials
- Form of distribution (classroom, newsletter, etc.)
- Whether or not the material is to be sold
- Type of reprint (ditto, photocopy, offset, typeset)

Guidelines For Off-Air Recording

To discuss the copyright law for recording television programs off-air and retaining the programs on videotape, programs must be divided into three groups: School Television Programs, Commercial Television Programs, and Public Broadcasting Programs.

School Television Programs

All series airing on the School Television schedule have copyright clearance for the public schools in North Carolina. The North Carolina Department of Public Instruction negotiates broadcast rights, off-air recording rights, and, in some cases, videocassette duplication rights with the producers of the series. The copyright status appears on each series' factsheet in the catalog, STV Catalog. Series fall into two copyright categories:

Unlimited Use designates a series that is owned by the Department of Public Instruction; programs in the series may be taped off-air and retained on tape for as long as the series is used.

Designated Time Period Use designates a series that may be taped off-air and retained on tape for as long as that series airs on the School Television schedule. Broadcast and record rights are negotiated periodically; school personnel are notified when the tapes are to be erased.

In addition to off-air recording rights, the Department of Public Instruction has purchased tape duplication rights for about ninety percent of the series airing on the School Television schedule. Schools may purchase programs on videotape from CIN Teleproductions (See STV Catalog).

Commercial Television Programs

The North Carolina Department of Public Instruction has no copyright jurisdiction over programs not airing on the School Television schedule. Since the copyright law did not address the question of off-air recording by educational institutions, many questions and many interpretations remain about the rights of these institutions to copy off-air commercial or public broadcast programs. A committee composed of producers, users, and legislators came to an agreement on guidelines for off-air recording of television broadcasts for use in instructional activities. Even though the guidelines may never become part of the law, their acceptance by a congressional subcommittee and their inclusion as an official document of that subcommittee will provide support in cases of suit for misuse.[1]

The guidelines include:

- Off-air recording guidelines apply only to non-profit educational institutions.
- A broadcast may be recorded simultaneously with the broadcast transmission and retained for a period of 45 calendar days after the date of recording. Upon conclusion of the retention period, all off-air recordings must be erased or destroyed.
- Off-air recordings may be used once by individual teachers in the course of relevant teaching activities. It may be repeated once and only once when instructional reinforcement is necessary in the classrooms and similar places devoted to instruction within a single building, cluster, or campus, as well as in the homes of students during the first 10 school days of the retention period.
- Off-air recordings may be made only at the request of and used by individual teachers, and may not be regularly recorded in anticipation of requests. No program may be recorded more than one time regardless of the number of times it is broadcast.

- A limited number of copies may be reproduced from each recording to meet the legitimate needs of teachers under these guidelines. Each such copy shall be subject to all provisions governing the original off-air recording.

- After the first ten consecutive school days from date of broadcast, the only use that can be made of the recording is teacher evaluation. This evaluation is to be used to determine the likelihood of using programs in the series or in purchasing a copy of the program.

- Off-air recordings need not be used in their entirety. The sequence of use must follow the order of the program, and the recording may not be altered.

- All copies of off-air recordings must include the copyright notice on the broadcast program as recorded.

- Educational institutions are expected to establish procedures to maintain the integrity of these guidelines.

There are differing interpretations of the guidelines among educators, some more liberal than the interpretation stated here, some more conservative. The Media Advisory Committee in each school should establish school use policies that are in keeping with the copyright guidelines and the policies of the local board of education.

School Rental Of Videotapes For Classroom Use

The accessibility of videotape rental outlets has contributed to a problem for schools who wish to rent tapes for occasional use and still comply with the law. Many tapes are sold to videotape rental stores in a category classified as "For Home Use Only." A 1985 interpretation by the North Carolina Attorney General's Office provided the following information for schools. "Although the tape is designated as for 'Home Use Only,' a teacher may use the tape in his/her classroom as provided in the specific exemption found in Section 110 (1) of the Copyright Statute. It would not be an infringement of the owner's copyright to show the videotape in the classroom so long as all the conditions of subsection 110 (1) are met."[2]

Section 110 (1) requires that the "performance or display of a work by instructors or pupils (be) in the course of face-to-face teaching activities of a non-profit educational institution, in a classroom or similar place devoted to instruction,..."

Based on this interpretation, the following guidelines are recommended for schools when renting videotapes:

(1) Rent tapes in the school's name rather than an individual teacher's name. Where rental agreements, contracts, or rental cards are used, insist that such agreement be in the school's name.

(2) Assure that the rented tape will be for instruction, not for entertainment or reward. Using the tape as a reward for good behavior or to entertain a physical education class on a rainy day would probably not comply with section 110 (1).

Public Broadcast Service Programs

North Carolina's Center for Public Television offers many quality programs that have applicability in our schools. The limitations on off-air copying of these programs vary widely, however, and frequently fall outside the restrictions and allowances provided for commercial broadcasts. These programs are usually broadcast after the school day ends, in the evenings, or on weekends. Some programs, such as those produced and broadcast by the National Geographic Society, specifically provide schools with unlimited off-air taping rights. For others, however, schools should be advised that several years prior to the establishment of the commercial broadcast's 10-day fair use guidelines, PBS negotiated the rights to offer 7-Day School Rerecord Rights with various entertainment unions and producers. When there is no unlimited off-air taping rights specified, the following rules apply:[3]

(1) Programs may be rerecorded without a prior request from a teacher and may be recorded and exhibited each time a program is broadcast.

(2) Only a single copy of the program can be recorded by an educational institution and that copy cannot be duplicated.

(3) The program can be retained for a total of seven consecutive days following its broadcast and each time it is broadcast, but it must be erased at the end of the seven-day period.

(4) Teachers may exhibit the programs as often as needed during the seven-day period.

Cable, Closed Circuit, ITFS, Direct Broadcast Satellite, And Other Broadcast Rights

Each of these broadcasting entities' guidelines vary; educational institutions wishing to exhibit, transmit, or rerecord programming in a way not spelled out in the above categories should obtain accurate information on rights for school use from the broadcasting entity .

Guidelines For Microcomputer Software

In the 1980s and '90s, the tremendous growth in the use of computers—particularly microcomputers in schools—has focused attention on copyright law and microcomputer software. Unlike some areas affected by copyright law, microcomputer software copyright protection lacks case law precedent, so interpretation of the law contains many unresolved issues. Educators who are using microcomputer software are becoming increasingly concerned about varying interpretations of the 1976 Copyright Act and of a 1980 amendment to the Act which defines "computer program."

There are only two permissible instances in making "fair use" copies of software:

- That such a copy is created as an essential step in the utilization of the computer program in conjunction with a machine, and that it is used in no other manner; and
- That such a copy is for archival purposes only, and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.

One recent court case, B.V. Engineering v. UCLA,[4] has caused some changes in the court's interpretation of an educator's liability for violation in all areas of media. In this case, the University of California at Los Angeles did not contest the fact that copies of the software they purchased from B.V. Engineering were made illegally, but advocated that the Federal Government and B.V. Engineering were powerless to seek damages under the state institution's Eleventh Amendment immunity.

In deciding the B.V. Engineering case, the courts affirmed the arguments of UCLA, that as a state institution, they were immune from prosecution under the Eleventh Amendment to the United States Constitution. As a result, the 101st Congress in 1990 passed the Copyright Remedy Clarification Act which states, "H.R. 3045 clarifies that the intent of Congress when it passed the 1976 Copyright Act was that all defendants in copyright infringement suits, including states as well as private defendants, be liable for money damages. The purpose of the H.R. 3045, therefore, is to amend Title 17 to clearly and explicitly abrogate State sovereign immunity to permit the recovery of money damages against states." As a result, states, universities, schools, and individuals may now be sued for infringement damages.

Two of the best sources of information on the copyright law as it pertains to microcomputer software are the International Council for Computers in Education (University of Oregon, Eugene, Oregon) and the International Communications Industries Association (Fairfax, Virginia). The ICCE has published two documents: a "Policy Statement on Network and Multiple Machine Software" and a "Suggested District Policy on Software Copyright." The ICIA has published a pamphlet entitled, "Should I Copy Microsoftware." The following do's and don'ts are from this pamphlet and serve as a guide for educators seeking an interpretation of copyright law:

1. Don't make a copy unless you have the permission of the producer.

2. Be skeptical of those who say, "Go ahead and copy, nobody will ever know." Check with your school's attorney, or get the written permission of your supervisor.

3. Don't believe anyone who says that the "Off-Air Guidelines" and the guidelines for books, periodicals, and music apply to microcomputer software. Computer software is very different, and no copyright guidelines have been approved by national educator-publisher negotiating committees which created the other guidelines.

4. Do buy enough software to get your job done. Buying enough will relieve the temptation to make unauthorized copies.

5. Don't load one diskette into several machines without authorization from the producer.

6. When licenses are offered by producers, buy the licenses and adhere to the limitations in the licenses. Going beyond the terms of a license is as much a violation of the law as any other unauthorized copying.

7. Don't allow computer clubs to use school facilities unless they agree in writing to adhere to the Copyright Act. By letting them stay, you share the legal liability with the club should they be apprehended (vicarious liability).

8. Have strict rules to restrict the use of any "archival copy." While the law allows one archival copy, it may not be used in the classroom. Do keep it in a restricted area out of reach of all users.

9. If you accept a preview or on-approval copy from a producer, distributor, or dealer, be responsible for ensuring that no copies are made. The Copyright Law applies to previews just as it applies to software you have already purchased.

10. Don't authorize purchase of equipment specifically designed to break protection codes which are built into most software. Possession of such equipment, since its main use is to make unauthorized copies, may be used in court as evidence against you.

11. Do share with teacher, students, and administrative personnel a statement reflecting your personal respect for the Copyright Law. Your leadership will inspire others to maintain ethical practices.

Guidelines For Use Of Music Materials

Applications of copyright guidelines for printed matter do not fit as neatly in the area of music materials. Guidelines included here are not meant to limit the types of copying permitted under the standards of fair use stated in Section 107 of the Copyright Revision Bill. There may be instances in which copying, not falling within the guidelines stated below, may nonetheless be permitted under the criteria of fair use.

Permissible Uses:

- Emergency copying to replace purchased copies which for any reason are not available for an imminent performance provided purchased replacement copies shall be substituted in due course.

    (a) For academic purposes other than performance, multiple copies of excerpts of works may be made, provided that the excerpts do not comprise a part of the whole which would constitute a performable unit such as a section, movement or aria, but in no case more than 10 percent of the whole work. The number of copies shall not exceed one copy per pupil.

    (b) For academic purposes other than performance, a single copy of an entire performable unit (section, movement, aria, etc.) that is, (1) confirmed by the copyright proprietor to be out-of-print, or (2) unavailable except in a larger work, may be made by or for a teacher solely for the purpose of his or her scholarly research or in preparation to teach a class.

- Printed copies which have been purchased may be edited or simplified provided that the fundamental character of the work is not distorted or the lyrics, if any, altered or lyrics added if none exist.

- A single copy of recordings of performances by students may be made for evaluation or rehearsal purposes and may be retained by the educational institution or individual teacher.

- A single copy of a sound recording (such as a tape, disc, or cassette) of copyrighted music may be made from sound recordings owned by an educational institution or an individual teacher for the purpose of constructing aural exercises or examinations and may be retained by the educational institution or individual teacher. (This pertains only to the copyright of the music itself and not to any copyright which may exist in the sound recording.)

Prohibitions:

- Copying to create or replace or substitute for anthologies, compilations, or collective works
- Copying of or from works intended to be "consumable" in the course of study or of teaching such as workbooks, exercises, standardized tests and answer sheet, and like material
- Copying for the purpose of performance, except as mentioned above
- Copying to create recordings of chorus groups for resale to the public
- Copying for the purpose of substituting for the purpose of music, except as above
- Copying without inclusion of the copyright notice which appears on the printed copy

Impact Statement:

In order to provide educators with a better understanding of the influence that the copyright guidelines play in individual work situations, specific job situations are addressed with an impact statement. This impact statement addresses the responsibility of the professional educator to be knowledgeable of the law as it applies to that position and how it affects other persons (students, co-workers) influenced by that educator.

Teachers

For years, many teachers considered themselves to be immune from prosecution because of educator misinterpretations of "fair use" principles which apply to copyright restrictions, and also because publishers seemed unwilling to attempt prosecution of members of the education community. This attitude is changing, however, because of abuses by educators who are poorly informed about "fair use" and because advances in technology have made unauthorized duplication easier. Several recent actions, including B.V. Engineering and the resulting Copyright Remedy Clarification Act, indicate an increasing willingness on the part of copyright holders to protect their interests and on the part of the Federal Government to assure protection of those interests. The copyright laws allow restitution of up to $10,000 for each violation for which individuals can be held personally liable.

Under fair use standards, teachers are permitted to:

- Make a single copy of a short literary work for academic research, in teaching, or in preparation to teach a class.

- Make an overhead transparency from a workbook if not more than 10 percent if the workbook is used and the transparency is otherwise unavailable for purchase.

- Use recordings of student performances of a copyrighted work for dramatic or musical evaluation and instruction.

- Make the maximum number of copies that is permitted by special arrangements with copyright holders. Licensing agreements in literary works, videotaping, and microcomputer software may supersede the copyright law.

On the other hand, teachers violate the copyright laws when they:

- Photocopy or duplicate pages from a consumable workbook.

- Photocopy or duplicate pages from a book or magazine for use in a learning activity without securing permission from the copyright holder and reuse the pages in later activities or recopy the same material for each new use.

- Make non-emergency photocopies of music to use by students in performances or when emergency copies are not later replaced with purchased ones.

- Make duplicates of copyrighted microcomputer software to avoid purchasing one copy for each microcomputer.

- Make audiotapes from phonorecords.

- Make a reproduction or photocopy of any kind which does not include the copyright notice.

Computer Coordinators

School computer coordinators are in a leadership position in the purchase and use of microcomputer software. They should assist educators in adhering to the copyright laws by encouraging and monitoring the purchase of sufficient numbers of copies of a program so that illegal copying is unnecessary. They should stress planning procedures that would anticipate more accurately the number of program copies needed so special pricing agreements can be obtained.

As a role model, computer coordinators have a responsibility to deter the making of back-up copies unless permission to do so is clearly stated; to refrain from using unauthorized copies or unlocking or protection-breaker programs; and to discourage the use of newsletters, swap sessions, or electronic bulletin boards to exchange illegal copies of software or information on such copies.

The computer coordinator must provide leadership in the school system by being well-informed and by informing others about the copyright laws as applied to computer software. When teachers make illegal copies with the consent, assistance, or knowledge of the coordinator, the coordinator may be included in any litigation which may result.

Media Coordinators

School Media Coordinators are in a unique position with regard to copyright. Uninformed teachers, students, and principals are likely to request copies of instructional resources that exceed what is permitted by the fair use provision of the law and the subsequent guidelines.

The following steps should be taken by the media coordinator to meet the spirit of the law:

- Know the law and accompanying guidelines. Be proactive instead of reactive. Inform others about the services that can be provided and the limits imposed by the law.
- Provide adequate notification. Place signs in appropriate places—e.g., above copy machines and on video and audio recording equipment.
- Initiate the formulation of systemwide policies that address copyright issues. Introduce or advertise these policies in faculty meetings, PTA meetings, and through newsletters.

Refusing to assist someone in making illegal copies may require diplomacy on the part of the media coordinator. Modeling appropriate behavior will convey the most effective message. Media coordinators may be included in litigation to the extent that they assist other educators in obtaining illegal copies.

Principals

The principal's attitude in proper application of the copyright law is crucial to the school attitude towards compliance. S/he must be knowledgeable of the law and current developments in the law, and must provide opportunities for all personnel within the school to be aware of the legal issues.

Principals should provide guidance for the school staff by:

- Setting a good example of compliance and insisting that teachers do likewise.
- Encouraging the development of school board policies on copyright.
- Arranging staff development on current copyright issues and addressing the special areas of copyright with music teachers, media coordinators, etc.
- Encouraging the development of a reference collection of copyright articles, books, etc., in the professional collection in the school.
- Developing a process for obtaining permission to reproduce materials.
- Purchasing materials in sufficient quantities to preclude the need for illegal copies.

Failure of principals to properly inform their staffs of the legal ramifications of copyright violations may result in their inclusion in litigation resulting from employee and student violations.

Superintendents & School Boards

At the district level, superintendents are responsible for developing policies which reinforce the fair use doctrines of the existing copyright law. Procedures for duplicating visual, printed, and auditory resources as well as computer software should be incorporated into School Board Policies and disseminated to all district employees. Workshops and staff development on permissible and nonpermissible copying should be held regularly to keep all staff members current on new developments in the law.

Failure of the superintendent and school board to properly inform its employees and students of the rules governing fair use in copyright may result in their inclusion in litigation resulting from employee and student violations.

FOOTNOTES

[1] Guidelines For Off-the-Air Recording of Broadcast Programming for Educational Purposes. House Sub-Committee on the Courts, Civil Liberties, and the Administration of Justice. 1981.

[2] Letter from Kay R. Webb, Assistant Attorney General to Elsie Brumback, Assistant State Superintendent, November 13, 1985. RE: Copyright; Use of Videotaped Programs.

[3] PBS Copyright Compendium.

[4] B.V. Engineering vs. UCLA, 657 F Supp. 11 (C.D. Cal. 1987), affirmed 858 F 2nd 1394 (9th Cir. 1988), Cert. denied S. Ct. 1557 (1989).

Bibliography of Copyright Publications

Copyright Basics. (Circular 1). Washington, DC: Library of Congress. (Free)

Title 17 - Copyrights. United States Code. (Public Law 94-553) Washington, DC: Library of Congress. (Free)

Report 101-282. Copyright Remedy Clarification Act. U.S. Congress 101st Session.

Evans, Julie A. (1989). "Copyright Permission: Who Needs It, How To Get It." School and College. June, 29-34.

Goldsmith, Kory. (1989). "Copyright Law For Public Schools." School Law Bulletin. 20, 10-17.

Mawdsley, Ralph D. (1986). "Use Of Videocassettes In The Classroom." West's Education Law Reporter, 32, 1163-72.

Miller, Jerome K. (1989) Video Copyright Permissions: A Guide To Securing Permission To Retain, Perform, and Transmit Television Programs Off The Air. Friday Harbor, WA: Copyright Information Services. ($30)

Miller, Jerome K. (1989) Using Copyrighted Videocassettes in Classrooms, Libraries, and Training Centers. Friday Harbor, WA: Copyright Information Services. ($20)

Soma, John T., & Pringle, Dwight L. J. (1986). "Computer Software In the Public Schools." West's Education Law Reporter. 28, 315-323.

Steinhilber, August. Copyright Law: A Guide For Public Schools. Alexandria, Va.: National School Boards Association. ($10)

Walsh, Mark. (1989, May 10) "Copyright Holders Aiming At Schools' Legal Shield." Education Week, p. 4.

Addresses:

Copyright Office
Library of Congress
440 Tucker Avenue
Washington, DC 20559
(202) 479-0700

Copyright Information Services
Friday Harbor, WA 98250-1460
(206) 378-5128

[***Sample Copyright Policy—Reidsville City Schools***]

4132.1

DUPLICATION OF COPYRIGHTED MATERIALS

I. General Statement And Fair Use Interpretation

A. In the past, many educators considered themselves immune from prosecution for breaking copyright laws because of educator misinterpretations of "Fair Use" principles which apply to copyright restrictions. This attitude is changing. Several recent court cases indicate a willingness on the part of copyright holders to protect their interests.

B. The Reidsville City Board of Education does not sanction any illegal duplication of materials. Any person who duplicates materials unlawfully does so at his own personal risk. All personnel employed by the Reidsville City Board of Education shall be expected to comply with the copyright laws and its policy in the duplication of materials for educational purposes.

C. The copyright law makes it illegal for anyone to duplicate copyrighted materials whether in audio, visual or printed form. Severe penalties are provided for unauthorized copying outside the bounds of "Fair Use." "Fair Use" applies to reproduction for such purposes as criticism, comment, news reporting, teaching, scholarship or research. "Fair Use" includes four conditions, all of which must be met, if duplicating or changing a product meets the criteria for "Fair Use." The four standards which must be complied with if the doctrine of "Fair Use" is satisfied are:

1. The purpose and character of the use. The use must be for such purpose as face to face teaching or scholarship and must be nonprofit. "Fair Use" might allow teachers acting on their own to copy small portions of a work for the classroom, but will not allow a school system or institution to do so.

2. The nature of the copyrighted work. Copying from a consumable workbook designed for a course of study would not be considered "Fair Use."

3. The amount used in relation to the whole. Copying the whole of a work would not be considered "Fair Use"; copying a small portion may be considered "Fair Use." Extracting a short sequence from a 16MM film may be different than using a short excerpt from a textbook, because, two minutes out of the 20-minute film may be the very essence of that production; so a quantitative test is not enough.

4. The effect of the use upon the potential market for or value of the copyrighted work. If resulting economic loss of the copyright holder can be shown, making a single copy of certain materials would result in penalties. Making multiple copies would result in greater penalties.

D. Changing the form of copyrighted materials from one format to another is a violation of the copyright act (i.e. film to Videotape, phonorecord to cassette).

E. Videotapes acquired for single station use may not be used in a closed circuit environment without permission of copyright owner.

F. Anytime that materials are copied, permission should be requested from the copyright holder, even if materials copied fall under the fair use standard.

Whenever the criteria for reproducing materials through "fair use" cannot be met, then it is necessary to obtain written permission from the publisher. Permission to copy must include:

1. Title, author and/or editor, and edition of material to be duplicated
2. Exact material to be used, giving amount, page numbers, chapters and if possible, a photocopy of the materials
3. Number of copies to be made
4. Use to be made of duplicated materials
5. Form of distribution (classroom, newsletter, etc.)
6. Whether or not the material is to be sold
7. Type of reprint (ditto, photocopy, offset, typeset)

II. Copying Guidelines For Printed Matter

Certain kinds of documents may be copied without restriction. Published works which were never copyrighted, published works whose copyrights have expired, and US Government publication (not to include works published by others who received US Government grants or contracts) may be copied at the discretion of the user.

Reproduction of copyrighted material for educational and scholarly use is permitted for purposes of criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, and is not an infringement of copyright.

Guidelines for single copies for educators for scholarly research, use in teaching, or in preparing to teach include:

a. A chapter from a book

b. An article from a newspaper or periodical

c. A short story, short essay or poem

d. A chart, graph, diagram, drawing, cartoon, or picture from a book, periodical or newspaper

These guidelines also indicate the degree of brevity which is considered acceptable for multiple copies (one copy per student). Other fair use conditions which must be met include spontaneity and cumulative effect.

Spontaneity is copying at the instance and inspiration of the teacher. The time between the decision to use the work for maximum teaching effectiveness and the use of the material is so close that a reply to a permission request would not be received before use.

Cumulative effect refers to the maximum application of fair use that may be made over a period of time. The attached Table 1. indicates an acceptable level of use.

III. Copyright Guidelines For Use Of Music Materials

1. Permissible uses:

   a. Emergency copying to replace purchased copies which for any reason are not available for an imminent performance provided purchased replacement copies shall be substituted in due course.

   b. (i) For academic purposes other than performance. Single or multiple copies of excerpts of works may be made, provided that the excerpts do not comprise a part of the whole which would constitute a performable unit such as a section, movement or aria, but in no case more than 10 per cent of the whole work. The number of copies shall not exceed one copy per pupil.

      (ii) For academic purposes other than performance, a single copy of an entire performable unit (section, movement, aria, etc.) that is, (1) confirmed by the copyright proprietor to be out of print or (2) unavailable except in a larger work, made by or for a teacher solely for the purpose of his or her scholarly research or in preparation to teach a class.

   c. Printed copies which have been purchased may be edited or simplified provided that the fundamental character of the work is not distorted or the lyrics, if any, altered or lyrics added if none exist.

   d. A single copy of recordings of performances by students may be made for evaluation or rehearsal purposes and may be retained by the educational institution or individual teacher.

   e. A single copy of a sound recording (such as a tape, disc or cassette of copyrighted music may be made from sound recordings owned by an educational institution or an individual teacher for the purpose of constructing aural exercises or examinations and may be retained by the educational institution or individual teacher. (This pertains only to the copyright of the music itself and not to any copyright which may exist in the sound recording.)

2. Prohibitions:

   a. Copying to create or replace or substitute for anthologies, compilations, or collective works.

b. Copying of or from works intended to be "Consumable" in the course of study or of teaching such as workbooks, exercises, standardized tests and answer sheet, and like material.

c. Copying for the purpose of performance, except as mentioned above.

d. Copying for the purpose of substituting for the purpose of music, except as above.

e. Copying without inclusion of the copyright notice which appears on the printed copy.

IV. Guidelines For Videocassette Use

1. School Television Programs

All series airing on the School Television schedule have copyright clearance for the public schools in North Carolina. The State Department of Public Instruction negotiates broadcast rights, off-air recording rights, and, in some cases, videocassette duplication rights with the producers of the series. The copyright status appears on each series fact sheet in the catalogue, SCHOOL TELEVISION TODAY. The series fall into one of two copyright categories:

> Unlimited Use designates a series that is owned by the Department of Public Instruction; programs in the series may be taped off-air and retained on tape for as long as the users want to use the series.
>
> Designated Time Period Use designates a series that may be taped off-air and retained on tape for as long as that series airs on the School Television schedule. Broadcast and record rights are negotiated periodically; school personnel are notified when the tapes are to be erased.

In addition to off-air record rights, the Department of Public Instruction has purchased tape duplication rights for about ninety percent of the series airing on the School Television schedule. Schools may purchase programs on videotape.

2. Non-School Television Programs:

> The North Carolina Department of Public Instruction has no copyright jurisdiction over programs not airing on the School Television schedule. There are many questions and interpretations concerning the right of educational institutions to tape and use such programs. The copyright law did not address the question of off-air recording of television broadcast for use in instructional activities. Even though the guidelines may never become part of the law, their acceptance by the Congressional Subcommittee and their inclusion as an official document of the Subcommittee will provide support in cases of suit for misuse. The guidelines are as follows:

a. Off-air recording guidelines apply only to non-profit educational institutions.

b. A broadcast may be recorded simultaneously with the broadcast transmission and retained for a period of 45 calendar days after the date of recording. Upon conclusion of the retention period, all off-air recordings must be erased or destroyed.

c. Off-air recordings may be used once by individual teachers in the course of relevant teaching activities. It may be repeated once and only once when instructional reinforcement is necessary in the classrooms and similar places devoted to instruction within a single building, cluster or campus as well as in the homes of students during the first school days of the retention period.

d. Off-air recordings may be made only at the request of and used by individual teachers, and may not be regularly recorded in anticipation of requests. No program may be recorded more than one time regardless of the number of times it is broadcast.

e. A limited number of copies may be reproduced from each recording to meet the legitimate needs of teachers under these guidelines. Each such copy shall be subject to all provisions governing the original off-air recording.

f. After the first ten consecutive school days, the only use that can be made of the recording is teacher evaluation. This evaluation is to be used to determine the likelihood of using programs in the series or in purchasing a copy of the program.

g. Off-air recordings need not be used in their entirety. The sequence of use must follow the order of the program and the recording may not be altered.

h. All copies of off-air recordings must include the copyright notice on the broadcast program as recorded.

i. Schools are expected to establish appropriate control procedures to maintain the integrity of these guidelines.

3. Privately Purchased Or Rented Video Tapes

a. Privately purchased videos are sold with a home use only agreement, not with audience rights.

b. Videotapes rented to individuals are rented under an agreement that they be used for home use only. Video tapes to be shown at school should be rented using a school owned card.

4. Public Broadcast Service

Guidelines For Taping PBS Programs

Several years prior to the establishment of the 10-Day Fair Use Guidelines, the Public Broadcasting Service (PBS), negotiated with various entertainment unions and producers the rights to offer 7-Day School Rerecord Rights for some PBS programming. Many programs and series presently distributed by PBS through its member stations include 7-Day

School Rerecord Rights whose criterion are slightly different than those for the 10- Day Fair Use.

The 7-Day School Rerecord rights allow the following:

(a) Programs may be recorded without a prior request from a teacher and may be recorded and exhibited each time a program is broadcast.

(b) Only a single copy of the program can be recorded by an educational institution and that copy cannot be duplicated.

(c) The program can be retained for a total of 7 consecutive days following its broadcast, each time it is broadcast, but must be erased at the end of the 7-day period.

(d) Teachers may exhibit the program as often as needed during the 7-day period.

V. Guidelines For Microcomputer Software

There are only two permissible instances in making fair use copies of software:

a. That such a copy is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner; and

b. That such a copy is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful.

VI. The principal, through the cooperation of the Media Advisory Committee organized in each school, shall establish school use policies that are in keeping with the copyright guidelines and the policies of the Reidsville City Board of Education.

1. If the purpose of the copy or videocassette rental is primarily for rewarding or entertainment then such use violates the intent of "face to face teaching".
2. If the purpose of the copy or videocassette rental is to save the school from purchasing the material such use is likely to violate the intent of this policy.
3. Media coordinators should regularly provide teachers with information updating the existing copyright regulations.

Source: Federal Copyright Laws; Media Matters, Spec. Ed., 1985, SDPI.

PROFESSIONAL PUBLISHING

Board employees are encouraged to write and prepare professional material for publication in their areas of expertise. Employees who prepare material on their own time are not required to submit such material for review prior to publication. Such material becomes the property of the individual and may be published under his or her name.

When original materials are developed by employees or staff committees as a part of a special assignment for which they are paid, the district will have sole rights in matters of publication or reproduction. However, the district will clearly recognize and note the identity of the employee(s) who created the materials.

In situations where the proprietary rights to material is in doubt— as for example, when original instructional materials have been developed partially as part of a paid assignment and partially during the staff member's own time, arrangements will be made for the appropriate assignment of rights and any profits.

However, a staff member may use his/her background or knowledge of district programs and operations in professional writing of any type, without the Board claiming any rights to the materials or authority to approve them prior to publication, except that articles purporting to represent district policy will be cleared by the superintendent who may, if the subject warrants, seek Board clearance.

ADOPTED 4-8-91

REGIONAL RESOURCES STANDARDS

The Southern Association of Colleges and Schools (SACS) is the regional accrediting agency for North Carolina. Individual schools and school systems *voluntarily* seek accreditation; however, schools/systems seeking accreditation agree to abide by all stated policies and standards specified by SACS. [For further information about SACS, write: Southern Association of Colleges and Schools, (Commission on Elementary Schools or Commission on Secondary Schools) 1866 Southern Lane, Decatur, Georgia 30033-4097, (404) 329-6500 or 1-800-248-7701.]

Standards for Resources follow:

Commission on ELEMENTARY SCHOOLS (1990, P. 29)

Area H. Standards **4-9**

4. Provision shall be made for adequate and appropriate learning materials and equipment including those designed to accommodate the rapidly developing instructional technologies for all levels and areas of instruction in the school. Basic criteria for evaluation of media and materials shall be as follows:
    a. Materials shall provide opportunities for students to learn through doing.
    b. Materials shall be used in a variety of ways and by students at different development levels.
    c. Materials shall provide for individual and group use, interaction, and problem-solving.
    d. Materials shall be safe, well constructed, and attractive.

5. There shall be evidence of sufficient financial support for the school library/media center. Such financial support shall be budgeted and expended annually through the business office of the school/system for the purchase of library books, periodicals, audio visual materials, and computer software.

6. The library/media center shall serve as a multimedia learning center for the school. Its collection of media, both print and nonprint, shall be current, comprehensive, and carefully selected in terms of the school curriculum and instructional program and shall reflect rapidly developing instructional technologies.

7. The library book collection shall contain a minimum of 10 books per student or 1,500 books, whichever is greater. No school shall be required to have more than 10,000 books in its library collection. Library books on order but not delivered may be counted as a part of the requirement. No more than 5 copies of a title shall be counted in meeting this requirement.

8. The library/media collection shall be weeded annually to remove materials that are badly worn or out-of-date.

9. The school shall have an adequate and properly balanced collection of instructional equipment. Provision shall be made for on-going maintenance and replacement of this equipment.

Commission on SECONDARY SCHOOLS (1986, pp. 12-13)

Standard **5.3.3-5.6.2**

5.3.3 The services and materials provided shall be adequate in quantity, quality, and type to assure the breadth and depth in learning necessary for the development of academic skills, vocational competencies, and personal growth. The requirements for instruction in all courses shall be considered in maintaining the collections.

5.4.1 The materials collection shall include usable print books as indicated in Figure 2.

FIGURE 2

Minimum Book Collection

(Reference 5.4.1)

Membership	Collection
Up to 100	1,000 volumes
101-800	10 volumes per student
801-1,000	8,000 volumes + 6 volumes per student in excess of 800 students
1,001-1,500	9,200 volumes + 5 volumes per student in excess of 1,000 students
1,501-2,000	11,700 volumes + 4 volumes per student in excess of 1,500 students
2,001 and above	13,700 volumes + 3 volumes per student in excess of 2,000 students

5.4.2 Teacher and student recommendations shall be solicited and considered in purchasing library books and other materials.

5.4.3 A new school shall have at least two books per student upon opening and shall add at least two books per student per year until the basic book collection is reached.

5.5.1 The materials collection shall also include periodicals appropriate for and related to the interests of the students. The subscription list shall include no fewer than 10 titles or one for each 25 students in membership, whichever is greater. If justified by use, additional copies of a title may be included in this formula after the subscription list exceeds 30 titles.

5.5.2 The distribution of periodicals shall represent all areas included in the instructional program. One or more daily metropolitan newspapers and one or more local newspapers shall be included.

5.6.1 Nonprint materials shall be provided in the library/materials collection as indicated by the needs of the instructional program and in accordance with expenditures in 7.3.4

5.6.2 All materials shall be catalogued using a standard system.

MAPS and GLOBES

Minimum and Desirable Requirements

The Social Studies section of the Division of Curriculum and Instruction, NCDPI, recommends access to appropriate, up-to-date maps and globes that include most recent political divisions.

Maps should be spring mounted or stick/rod roll mounted.

The maps listed below as "highly desirable" should be readily available from the library media center or storage area if the school cannot afford one for each classroom.

K-3 classrooms should have access to:

One globe
—Readiness/beginner or other equivalent
—Should not be cluttered with too much information that would confuse primary students

One United States map
—Physical/political or political
—Readiness/beginner or equivalent listing
—Includes symbols and geographic features

One world map
—Physical/political or political

Grade 4 classrooms should have access to:

One globe
—Physical/political or one listed as appropriate for this level

One North Carolina map
—Physical/political
—Has most prominent cities and bodies of water

One United States map
—Detailed physical/political

One world map (highly desirable)
—Physical/political

Grade 5 classrooms should have access to:

One globe
—Intermediate physical/political or other listing appropriate for this leve

One United States map
—Detailed physical/political

One North American regional map
—Physical/political

One South American regional map
—Physical/political

One world map (highly desirable)
—Physical/political

Grade 6 classrooms should have access to:

One globe
—Intermediate physical/political or appropriate listing

One regional map of Europe
—Physical/political

One regional map of the Soviet Union
—Physical/political

One world map (highly desirable)
—Physical/political

Grade 7 classrooms should have access to:

One globe
—Intermediate physical/political or appropriate listing

One regional map of Asia
—Physical/political

One regional map of Africa
—Physical/political

One world map (highly desirable)
—Physical/political

One map of Oceania and Australia-New Zealand
—Physical/political

Grade 8 classrooms should have access to:

One globe
—Physical/political

One North Carolina map
—Physical/political

One United States map
—Physical/political

One world map (highly desirable)
—Physical/political

United States history map series (highly desirable)
—Select the series to fit the curriculum sequence at this grade level

Grade 9 classrooms should have access to:

Chart series
—Select to fit course content

One United States map
—Physical/political

One world map (highly desirable)
—Physical/political

HIGH SCHOOL WORLD STUDIES classrooms should have access to:

One globe
—Physical/political

One world map
—Physical/political

World history map series
—Select to fit course content

Chart series (highly desirable)
—Select to fit course content

Regional land mass maps (highly desirable)
—Select to fit course content such as cultures, area studies, etc.

UNITED STATES HISTORY classrooms should have access to:

One globe
—Physical/political

One United States Map
—Physical/political

One world map
—Physical/political

United States history map series
—Select to fit course content

HIGH SCHOOL ELECTIVES classrooms should have access to:

Maps, globes, charts appropriate to course content

Division of Curriculum and Instruction, Social Studies Section
Fall, 1991

Budget APPENDIX

- Budget Planning Strategies D-1
- Library Media Budget Planning D-2
- Sample Budget Worksheet D-3

BUDGET PLANNING STRATEGIES

- Serve on site-based management team and other curriculum area teams of the school/system
- Maintain an active, involved Media Advisory Committee
- Establish a plan for on-going development and maintenance of the instructional and media and technology collections of the school
- Submit a complete budget to supervisor or principal in advance of the preparation of the school budget
- Relate budget requests to accreditation or other accepted standards
- State budget requests as outcome measures
- Use research and statistical data to support budget requests
- Maintain an on-going inventory of materials and equipment
- Review statistics from annual inventory
- Collect circulation statistics, periodically
- Survey services periodically, investigating the need to update procedures and redirect, delete, or add new services
- Plan systematically for replacing equipment
- Communicate the importance of the library media program to parents, administration, and staff as a part of an on-going public relations plan
- Include accountability for program results
- Use the budget as a chart for a future course of action
- Check with the school bookkeeper (often the school secretary) for the correct codes to use for media and technology purchase orders
- Determine the form required by the individual school system before placing orders
- Determine the local policy for preview orders and telephone purchases, as well as any other special policies which may apply
- Assume nothing. Ask questions!

Library Media Budget Planning
Sample Program Form
School Year ____-_____

Goals/Objectives (What is the emphasis/priority?)	Activities (State how to meet goal/objective.)	Timeline (When on a calendar?)
1. Develop an appropriate Reference collection	1.1 Assess present reference collection 1.2 Discuss reference needs with teachers and students 1.3 Check several core lists of reference resources appropriate for my school	1.1.1 January 1.2.1 January, March, September 1.3.1 March
2. Involve teachers to a greater extent in the selection of library media center resources	2.1 Discuss resources in staff meetings 2.2 Copy selected reviews and send to teachers 2.3 Survey teachers for needed resources 2.4 Show new resources at staff meetings and tell who suggested them 2.5 Send bibliographies of newly acquired materials to staff	2.1.1 September 2.2.1 Throughout school year 2.3.1 January, March 2.4.1 Three times/year 2.5.1 January, September

After program needs are determined, project expenditures on a form, such as **Sample Budget Worksheet**. Finally, develop a calendar from the timeline column, such as the following:

January	Discuss reference needs with teachers and students Survey teachers for needed resources Send bibliographies of newly acquired materials to staff Order microfiche
February	Submit magazine order Interview sample of students about reading interests
March	Review/evaluate budget plan

SAMPLE BUDGET WORKSHEET

(Develop Your Own Form)

I.	Anticipated Expenditures (Ongoing year after year)	$ Projected	$ Allotted
A.	Magazines/newspapers	____	____
B.	Annuals/yearbooks/Indexes	____	____
C.	Microform subscriptions	____	____
D.	Promotional material for Nat'l Book Week, etc.	____	____
E.	Plays	____	____
F.	College guides	____	____
G.	Award books	____	____
H.	Supplies	____	____
I.	____	____	____
J.	____	____	____
	Total Anticipated	____	____

II	Assumed Expenditures (More closely tied to curriculum)		
A.	Books	____	____
B.	Reference	____	____
C.	Rebinding	____	____
D.	Paperbacks	____	____
E.	Professional materials	____	____
F.	Videocassettes	____	____
G.	Computer software	____	____
H.	Online charges	____	____
I.	____	____	____
J.	____	____	____
	Total Assumed	____	____

Facilities APPENDIX

- A Checklist for Media and Technology Facilities E-1
- Computer Facility Planning Guide E-8

A CHECKLIST FOR MEDIA AND TECHNOLOGY FACILITIES

SCHOOL________________________ ADM ________ DATE______________

DIRECTIONS: Check the items that are featured in the facility design. Specify recommended changes in the comments section.

GENERAL CONSIDERATIONS

COMMENTS

1. ACCESS

____ Single story
____ On ground floor
____ Convenient to instructional areas
____ Accessible to administrative suite
____ Convenient to an outside entrance
____ Accessible to elevator in multi-level building
____ Accessible to restrooms
____ Telephone access
____ Capable of expansion
____ Accessible by disabled users

2. SPACE (formula indicates BEP minimum of 400 ADM)

____ ELEMENTARY - 2800 sq. ft. + 4-6 sq. ft. per student over 400
____ MIDDLE - 3400 sq. ft. + 4-6 sq. ft. per student over 400
____ HIGH - 3600 sq. ft. + 4-6 sq. ft. per student over 400

3. MECHANICS/ENGINEERING

____ Master light switch near entrance
____ Zoned lighting
____ Proper lighting
____ Devices to control lighting
____ Acoustical control
____ Climate control, independent from other areas
____ Ample accessible electrical outlets
____ Surge protection, where necessary
____ Adequate number of circuits to distribute electrical load

3. MECHANICS/ENGINEERING CONT'D

____ Accommodation for networks
____ Telephone lines for voice communications
____ Telephone lines for data communications
____ Video signal access and distribution
____ Intercom speaker with volume control
____ Warm and cold water sink

4. OTHER GENERAL CONSIDERATIONS

____ Flexibility in use of space
____ Safety features
____ Logical traffic patterns
____ Adequate visual controls
____ Limited number of entrances/exits
____ Outside "drop" for materials
____ Adequate quantity and type of storage
____ Appropriate furniture types and heights
____ Lever-type door handles
____ No thresholds on doors
____ Appropriate locks for doors and windows

CONSIDERATIONS FOR SPECIFIC AREAS

1. ADMINISTRATION/PLANNING

____ Easy access to circulation, reference, and workroom
____ Visual control of media center
____ 200 sq. ft + 50 sq. ft. for each additional staff
____ Telephone jack
____ Conduit and utilities to accommodate advanced technology
____ Access to school-wide audio/video/data networks
____ Appropriate furnishings
____ Storage for coats and personal items

COMMENTS

2. CATALOG

____ Easy access to reference, stack areas, and main entrance
____ Accessible by disabled users
____ Appropriate furniture
____ Conduit and utilities to accommodate automation
____ Access to school-wide audio/video/data networks

3. CIRCULATION

____ Near main entrance/exit (preferably on the right when exiting)
____ Easy access to administrative area, workroom, and catalog
____ Appropriate height furniture for students
____ Accessible by disabled users
____ Conduit and utilities to accommodate library automation
____ Access to school-wide audio/video/data networks
____ Intercom and clock
____ Telephone jack
____ Storage for supplies and for personal items of student workers

4. COMPUTER LAB

____ 40 sq. ft. per workstation with additional space for instruction and storage
____ Accessible by disabled users
____ Appropriate furniture and storage
____ Conduit and utilities to accommodate equipment
____ Telephone jack with protected data line
____ Accessible to media center and classrooms
____ Marker board
____ Visual access from media center, when supervised by media personnel
____ Security measures
____ Access to school-wide audio/video/data networks

COMMENTS

5. CONFERENCE/SMALL GROUP ACTIVITY

COMMENTS

____ Minimum 150 sq. ft.
____ Access from reference area
____ Visual access from media center
____ Appropriate furnishings and utilities
____ Marker board
____ Screen
____ Access to school-wide audio/video/data networks

6. DARKROOM

____ Minimum 150 sq. ft.
____ Accessible from workroom and production area
____ Baseboard cabinets with countertops
____ 4' wide shallow sink with warm and cold water
____ Light safe door
____ Safe light
____ "In use" indicator

7. DISPLAY AND EXHIBIT

____ Matched with educational specifications
____ Appropriate location
____ Appropriate size and height

8. DISTANCE LEARNING (DLS)

____ Matched with educational specifications
____ Two telephone lines, one is a dedicated line
____ Appropriate utilities and conduit

9. EQUIPMENT STORAGE/DISTRIBUTION/MAINTENANCE

____ Minimum 175 sq. ft., adjust to storage needs
____ Direct access to hallway
____ Door to hallway opens from the inside only

9. EQUIPMENT STORAGE/DISTRIBUTION/MAINTENANCE CONT'D

COMMENTS

____ Access to workroom
____ Appropriate storage units, shelving, bins, etc.
____ Countertop or worktable with electrical access
____ No windows
____ Separate lock system

10. INDEPENDENT WORK AREAS

____ Merged with other areas such as reference or conference
____ Appropriate tables or carrels for independent work
____ Furniture and utilities to accommodate use of various equipment

11. INFORMAL READING

____ Away from quite, study areas
____ Padded informal seating
____ Appropriate sized furniture for intended users

12. LARGE GROUP INSTRUCTION

____ Adequate size to accommodate largest class
(allow 143 sq. ft. for each 3' x 5' table with 4-6 chairs; add teaching space)
____ Near reference area and book stacks
____ Ability to darken the area, convenient switches
____ Screen
____ Utilities for use of equipment
____ Marker board
____ Appropriate size and number of tables and chairs
____ Visual control of the media center from the teaching station
____ Access to school-wide audio/video/data networks

13. MULTIPURPOSE ROOM

____ Matched with educational specifications

14. PERIODICAL STORAGE

COMMENTS

____ Size to accommodate storage needs
____ Near reference, workroom, and circulation
____ Appropriate shelving and microform storage units

15. PRODUCTION

____ Near equipment storage area
____ Adjacent to or incorporated in workroom
____ Water- and stain-resistant tables and countertops
____ Warm and cold water sink; paper towel and soap dispensers
____ Adequate number of cabinets, drawers, and tables
____ Independent light control with convenient switches
____ Adequate electrical outlets and other utilities
____ Access to school-wide audio/video/data networks

16. PROFESSIONAL AREA

____ Minimum 150 sq. ft., varies with expected use (60 sq. ft. per person)
____ Accessible to workroom and production areas
____ Adequate electrical outlets and other utilities
____ Adequate adjustable shelving and other storage
____ Appropriate furnishings; leisure and formal furniture
____ Telephone jack
____ Access to school-wide audio/video/data networks

17. REFERENCE

____ Accessible from administrative and circulation areas
____ Near main entrance (preferred location)
____ Convenient to periodical storage
____ Adequate adjustable shelving and other storage
____ Appropriate furnishings
____ Adequate electrical outlets and other utilities
____ Access to school-wide audio/video/data networks

18. STORY SHARING

ELEMENTARY:
____ 180-270+ sq. ft. of open floor space for seating 30 students
____ Away from main traffic flow
____ Extra padding under carpet
____ Divided shelving for picture/easy books
____ Appropriate informal furniture
____ Adequate electrical outlets and other utilities
____ Screen
____ Marker board
____ Ability to darken area with convenient switches and/or other light controls
____ Access to school-wide audio/video/data networks

MIDDLE AND HIGH SCHOOL: SEE Informal Reading

19. WORKROOM

____ Adjacent to or merged with production area
____ Accessible to administrative area and equipment storage
____ Water- and stain-resistant tables and countertops
____ Warm and cold water sink; paper towel and soap dispensers
____ Adequate number of cabinets, drawers, and tables
____ Independent light control with convenient switches
____ Adequate electrical outlets and other utilities
____ Telephone jack
____ Access to school-wide audio/video/data networks
____ Intercom with independent volume control
____ Clock

20. OTHER SPECIALIZED AREAS

List areas and features to be evaluated on additional sheets.

COMMENTS

COMPUTER FACILITY PLANNING GUIDE

"The special needs of a computer facility impact upon acceptance, use, teaching and learning. If teachers are required to use poorly designed computer facilities for instruction, they must modify their instruction to compensate for the effects of the design. For the students, poor design means they must twist, turn, and stretch in order to see the board, work with handouts and references, or even operate the computer....Thoughtful advance planning assures that the classroom is systematically designed to promote both teaching and learning."

Sales, Educational Technology, May, 1985, p.7.

"Accommodating numerous computers—along with printers and hard disks and networks—requires more sophisticated planning than does simply putting a computer on a table in the back of the room. Facilities planners must address unique issues of electrical power and network access, as well as appropriate furniture and lighting."

T.H.E. Journal MAC Special Issue 1990

The following guidelines are intended to give general directions and may not apply to every situation.

ROOM - SELECTION

_____ 1. Rectangular room with no partitions or dividers.

_____ 2. Adequate space (40 square feet) for each anticipated workstation which includes table, chair, and circulation area.

_____ 3. Central location in terms of accessibility by teachers and students and in the vicinity of the media center.

_____ 4. Windowless room to prevent glare on video display and to minimize security problems.

_____ 5. Location away from highly visible, heavily traveled areas to prevent security problems.

_____ 6. Convenient location accessible to bathrooms to help accommodate after school activities such as teacher in-service and adult education sessions.

ROOM - PREPARATION

_____ 1. Security devices such as lock on door with unduplicated key, locks on windows, etc.

_____ 2. Security system for room or building (optimum).

_____ 3. Opaque window shades, blinds, or curtains, easily controlled to reduce glare where windows cannot be eliminated.

_____ 4. Light-colored, low-gloss paint on walls to reduce reflected glare and reduce need for bright overhead lighting.

_____ 5. Recessed or indirect overhead lighting to reduce glare.

_____ 6. Indirect light levels of 40 to 50 foot-candles.

_____ 7. Hardwood, vinyl, or anti-static carpeting on floors to reduce static electricity. Avoid dust-producing concrete floors.

_____ 8. Electrical power supply on separate circuit from other areas and equipment. Furnaces, stoves, shop equipment, or appliances with large power consumption rates can cause power fluctuations which may damage equipment, cause equipment malfunctions, or destroy data.

_____ 9. Four grounded receptacles (CPU, monitor, printer, and one other peripheral) within 4 feet of each workstation and seven receptacles within 4 feet of the teacher workstation. The teacher workstation may be equipped with any of the following: CPU, printer, monitor, LCD panel, overhead projector, CD-ROM drive, VCR, videodisc player, external hard disk, modem, etc.

_____ 10. Three (typically) amps of electrical power at each workstation with a maximum of 15 amps on any circuit.

_____ 11. Line boosters, anti-surge protectors, or uninterrupted power supplies (UPS) on computer outlets to prevent data loss, interrupted data transmissions, or damage to hardware.

_____ 12. Master switch(es) to control power to workstations.

_____ 13. Master switch to control lighting level for different instructional situations such as when using printed materials, LCD panel and overhead projector, computers, etc.

_____ 14. A separate temperature control for the computer lab in order to provide a relatively stable temperature between 60°F and 80°F with no greater change than 15 degrees per hour.

_____ 15. Dust filters on air vents.

_____ 16. Dust covers on hardware to avoid collection of dirt, chalk dust, pollen, etc.

_____ 17. Relative humidity between 40% and 60%. High humidity promotes oxidation on disk drive heads and electrical connections.

_____ 18. Acoustical treatment for noise control.

_____ 19. Ceiling tiles in good condition. Brittle, old ceiling tiles may fall on equipment or produce tile dust that can enter hardware through vent slots or cooling screens.

_____ 20. Wall boxes/outlets for voice/video/data should be 4" by 4" extra deep.

EQUIPMENT - LOCATION

_____ 1. Computers away from devices which cause magnetic fields. (electric motors, audio speakers, television receivers, magnets, etc.)

_____ 2. Computers where sunlight will not strike the monitor screens and cause glare. Turning up brightness controls on monitors to compensate for glare reduces the life expectancy of the cathode ray tube (CRT).

_____ 3. Hardware away from potential water damage from leaking roofs, radiators, sinks, water fountains, etc.

_____ 4. Hardware along eastern or northern walls where summer sun cannot cause overheating.

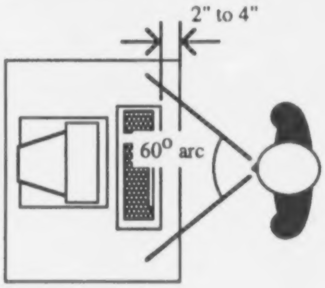
_____ 5. Printers away from walls adjoining other classrooms because of the vibration and noise they produce.

_____ 6. Arrangement for three work areas:
  - Student workstations with sufficient space between rows to allow the teacher and others to move freely around the room.
  - Work area at rear or side of room for non-computer activities.
  - Teacher presentation station with space that permits the use of an overhead projector and LCD panel and/or large screen monitor for easy class viewing. *(See attached diagrams).*

_____ 7. Keyboards positioned for typing so that the user's elbow is bent at an angle between 80° and 120° while typing.

_____ 8. Seating to allow the computer user to be seated at least arms length from his/her monitor and four feet from anyone else's to decrease VDT emissions (ELECTRONIC LEARNING, October 1990, Bill Morgan, page 14).

_____ 9. Center of video screen 10° - 20° below the horizontal of the user's eyes to prevent sore neck muscles by promoting good posture and reducing head movement when referring between screen and printed material.



_____ 10. Equipment, which is used most frequently, in the central field of vision (60° arc) and within easy reach (2" - 4" from front edge of table). (See diagram.)

_____ 11. Video screens in a position to avoid distracting others.

FURNITURE - TABLES

_____ 1. Adjustable table legs to suit size and personal preference of individual users and promote good posture, with openings for cables to drop to floor.

Tables (working surface)

GRADE LEVEL	HEIGHT	WIDTH	DEPTH
Elementary	22-26"	54-60"	24-36"
Middle	23-28"	54-60"	24-36"
High	26-28"	54-60"	24-36"

_____ 2. Storage shelves as part of the table for manuals, supplies, student belongings, etc.

_____ 3. Space at each table to accommodate two chairs comfortably (54") without interference from the table legs (36" minimum width).

_____ 4. Light-colored, no-glare finishes to reduce eyestrain caused by the contrast between the workstation surface and printed reference material.

_____ 5. Modesty panel to keep walls clean and computer cords safe.

_____ 6. Sturdy tables, large enough to support a computer system and student materials, as well as allow space for work.

_____ 7. No casters that discharge static electricity.

_____ 8. Lockable furniture with casters for mobile units for security and flexibility of computer use.

_____ 9. Wireways and cable trays instead of conduit to carry all low voltage cabling.

FURNITURE - CHAIRS

_____ 1. Adjustable chairs for body and back height to maximize comfortable working position.

_____ 2. Chair height to allow a knee-bend angle of 90°.

Chairs

GRADE LEVEL	HEIGHT
Elementary	11-15"
Middle	13-16"
High	16"

_____ 3. Chair that includes shelf or rack under seat for storage of student items. (Optional)

_____ 4. Chairs with rollers for added flexibility of movement.

FURNITURE - MISCELLANEOUS

_____ 1. Adequate shelving for reference books, software documentation, and texts.

_____ 2. Storage for disks, printer paper, and equipment not in use.

_____ 3. Some lockable storage space.

_____ 4. Shelving and storage easily accessible without interrupting class.

_____ 5. Bulletin board(s) with instructions for the operation of hardware and software located near computers.

_____ 6. Marker boards, rather than chalkboards, to prevent dust.

_____ 7. Storage for diskettes at temperatures between 50° F and 125° F.

_____ 8. Document holder at each computer to reduce neck strain when the student is typing information into the computer from a printed copy. (Optional)

_____ 9. Tall cart or wall mounted large television/monitor.

EQUIPMENT - TELECOMMUNICATIONS/NETWORKING

_____ 1. Isolated or dedicated telephone line near teacher station in each classroom in the computer labs, and in appropriate locations in the media center.

_____ 2. Wiring/telecommunication closets should be located in each building (excluding storage) of a school complex. The closet should contain the mechanical terminations for a portion of both the horizontal and the riser wiring systems, as well as support for the passive and active devices to interconnect the horizontal-riser systems. *(See NCDPI Guidelines to Provide Uniform Wiring Service for Telecommunications in North Carolina Public Schools for details)*

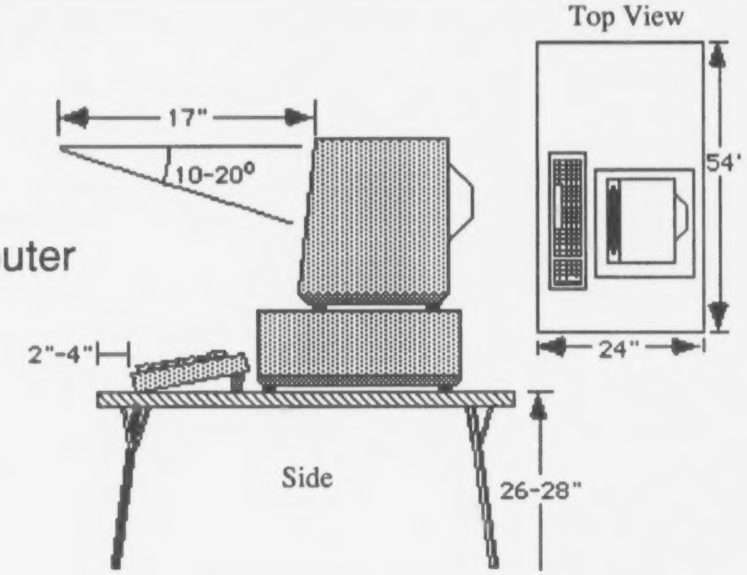
_____ 3. Wall wiring should conform to NCDPI Guidelines to Provide Uniform Wiring Service for Telecommunications in North Carolina Public Schools for both conduit and wireways/cable trays. Wireways and cable trays are recommended for low voltage cabling. Pull boxes for conduit and hinged side covers for wireways are necessary for access to cable installations/modifications.

_____ 4. Conduit size and type should conform to specifications in the NCDPI Guidelines to Provide Uniform Wiring Service for Telecommunications in North Carolina Public Schools, with riser conduit a minimum of 3 inches, horizontal conduit a minimum of 1 inch, and entrance conduit a minimum of 2 inches.

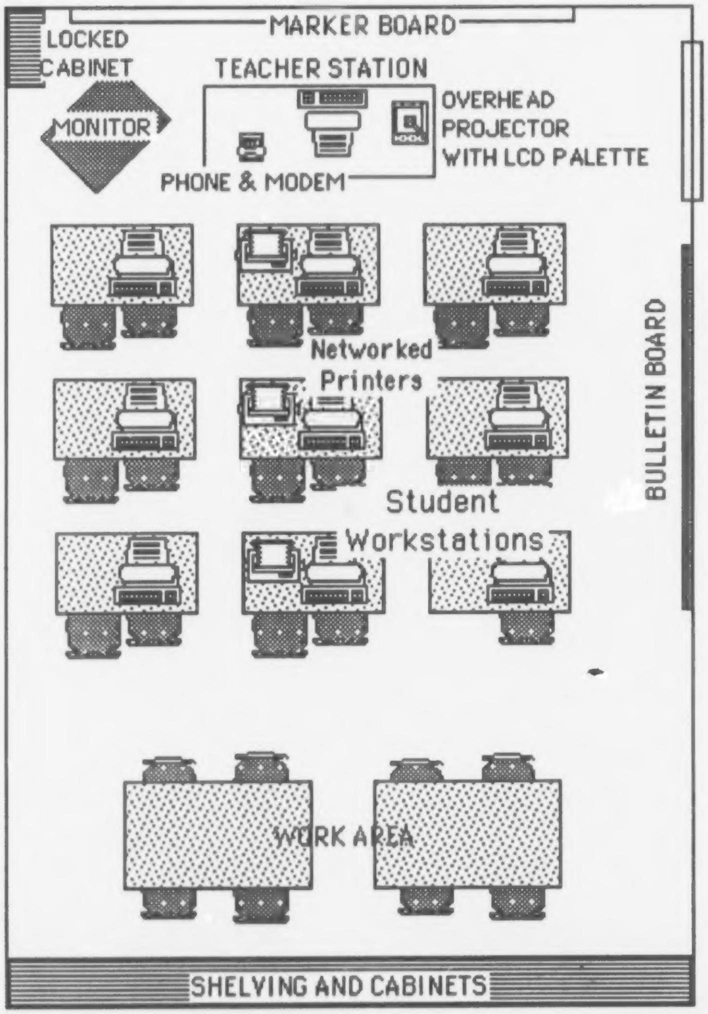
_____ 5. Data outlets/wall boxes should be available in a 4" x 4" extra deep size to provide voice, video (digital), and data. Wall boxes for classroom televisions or networked videodisc applications (analog) should also be 4" x 4" or can be a standard 2" x 4" duplex box. *(See NCDPI Guidelines to Provide Uniform Wiring Service for Telecommunications in North Carolina Public Schools for details)*

DIAGRAMS

Two Person Computer Workstation


Top View
17"
10-20°
54'
2"-4"
24"
Side
26-28"

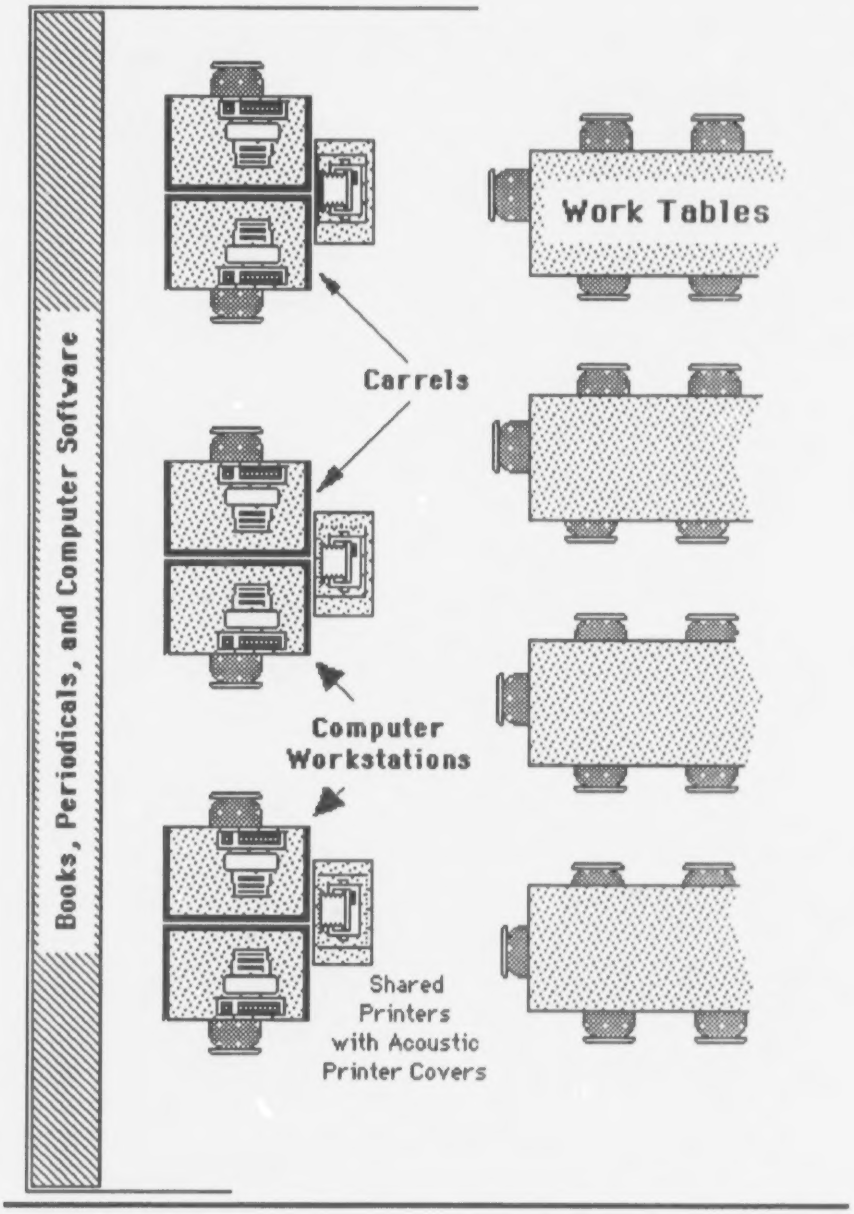
Two Person Computer Workstation


MARKER BOARD
LOCKED CABINET
TEACHER STATION
MONITOR
OVERHEAD PROJECTOR WITH LCD PALETTE
PHONE & MODEM
Networked Printers
Student Workstations
BULLETIN BOARD
WORK AREA
SHELVING AND CABINETS

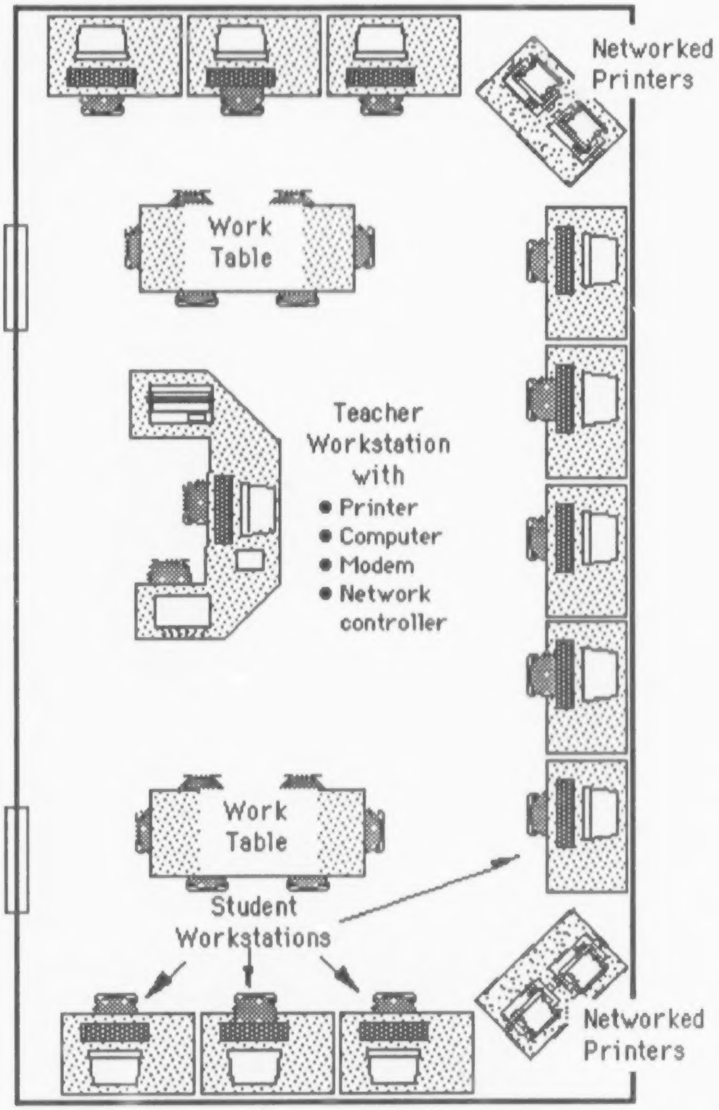
Computer Lab/Facility

Computer Lab/Facility

Option: Student stations could be configured differently such as continuous surface instead of separate tables.

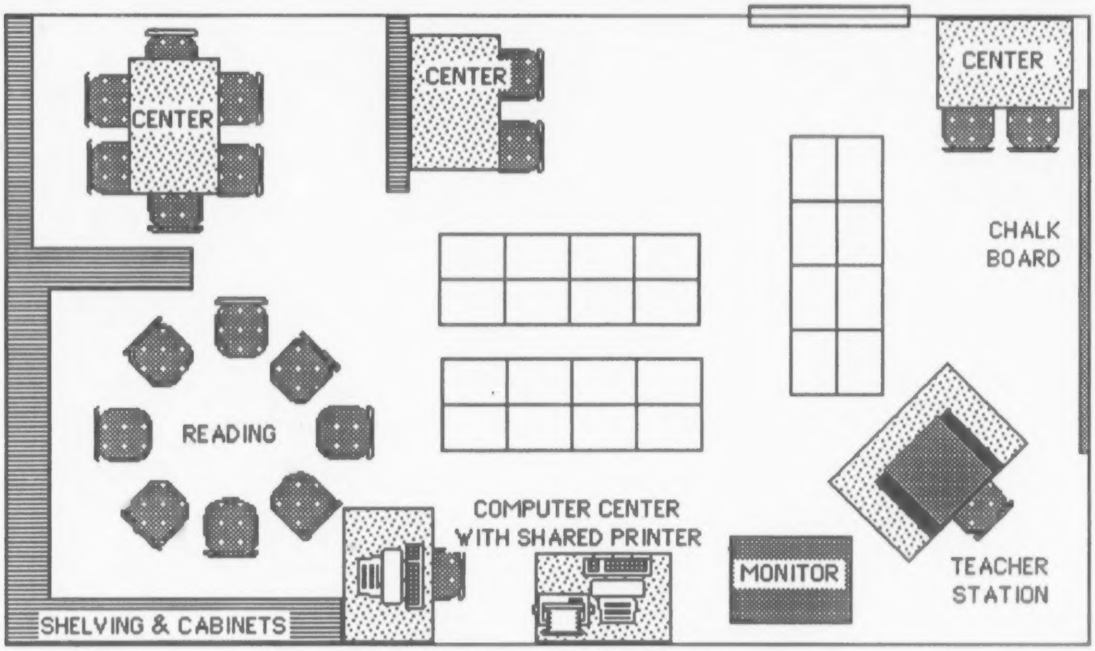

Books, Periodicals, and Computer Software
Work Tables
Carrels
Computer Workstations
Shared Printers with Acoustic Printer Covers

Media Center
Student Workstations

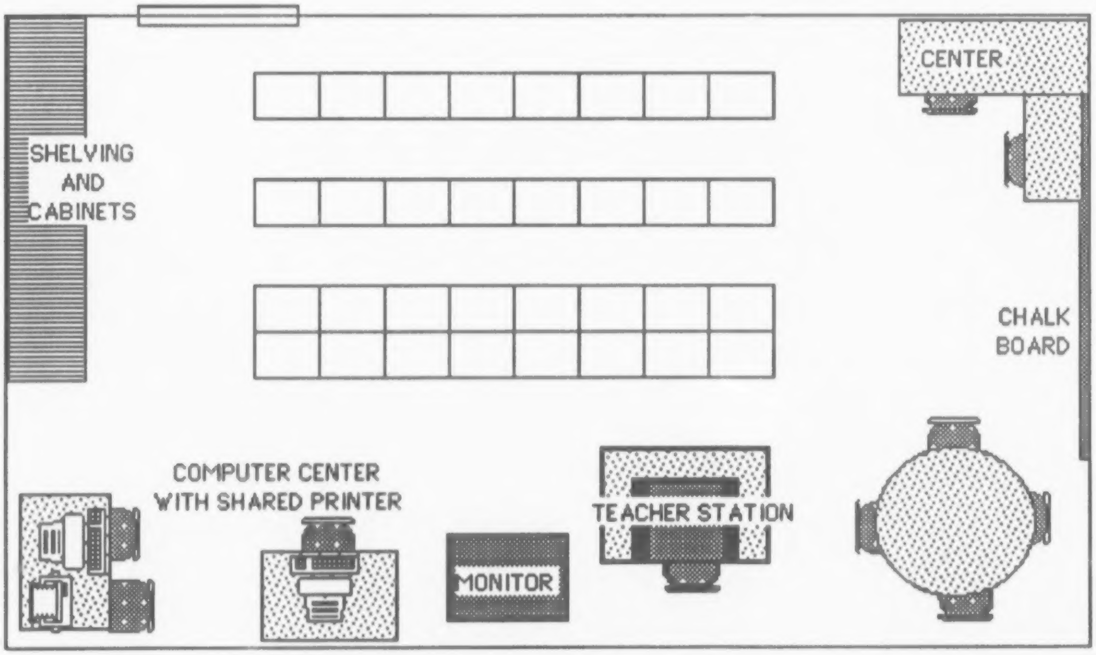

Networked Printers
Work Table
Teacher Workstation with
• Printer
• Computer
• Modem
• Network controller
Work Table
Student Workstations
Networked Printers

Computer Lab

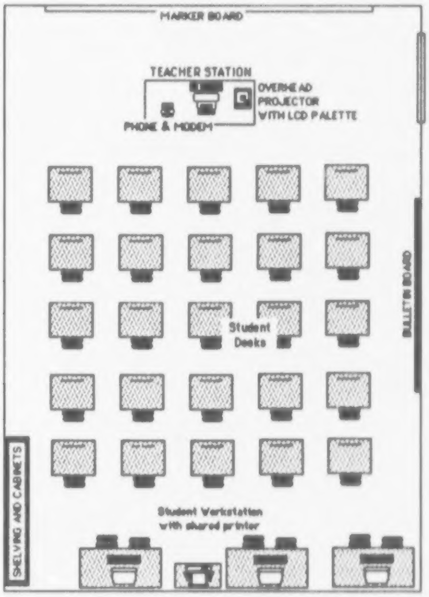
Option: With fewer computers, this configuration could be a mini-lab within a media center or resource room.


CENTER
CENTER
CENTER
CHALK BOARD
READING
COMPUTER CENTER WITH SHARED PRINTER
MONITOR
TEACHER STATION
SHELVING & CABINETS

Elementary/Middle Grade Classroom

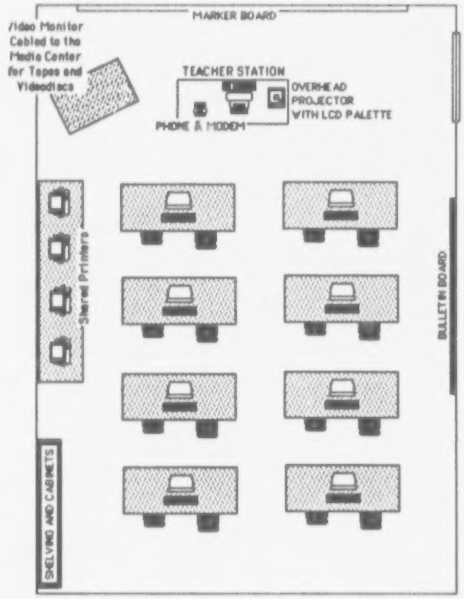

CENTER
SHELVING AND CABINETS
CHALK BOARD
COMPUTER CENTER WITH SHARED PRINTER
TEACHER STATION
MONITOR

Elementary/Middle Grade Classroom


MARKER BOARD
TEACHER STATION
OVERHEAD PROJECTOR WITH LCD PALETTE
PHONE & MODEM
Student Desks
BULLETIN BOARD
SHELVING AND CABINETS
Student Workstation with shared printer

High School Classrooms

Options: High School classrooms might be equipped with laptop computers for check-out. Computers also may be networked to a central file server for sharing software and work files.


MARKER BOARD
Video Monitor Cabled to the Media Center for Tapes and Videodiscs
TEACHER STATION
OVERHEAD PROJECTOR WITH LCD PALETTE
PHONE & MODEM
Shared Printers
BULLETIN BOARD
SHELVING AND CABINETS

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Personnel APPENDIX

- Media Coordinator Performance Appraisal Instrument F-1
- Recommended Job Description for Computer Coordinator F-5

MEDIA COORDINATOR PERFORMANCE APPRAISAL INSTRUMENT**

INSTRUCTIONS:

1. The evaluator is to rate the media coordinator on a six-point scale as indicated.
2. The evaluator is encouraged to add pertinent comments at the end of each major function.
3. The media coordinator is provided an opportunity to react to the evaluator's ratings and comments.
4. The evaluator and the media coordinator must discuss the results of the appraisal and any recommended action pertinent to it.
5. The media coordinator and the evaluator must sign the instrument in the assigned spaces.
6. The instrument must be filed in the media coordinator's personnel folder.

Rating Scale
(Please Check)

Superior	Well Above Standard	Above Standard	At Standard	Below Standard	Unsatisfactory

Media Coordinator Name ______________________________

School ____

1. Major Function: Managing Instruction* ☐ ☐ ☐ ☐ ☐ ☐

    1.1 Management of Instructional Time

    1.2 Management of Student Behavior

    1.3 Instructional Presentation

    1.4 Monitoring of Student Performance

    1.5 Instructional Feedback

    1.6 Facilitating Instruction

    1.7 Correlating Instruction

Comments ____

____

____

---

* Incorporates Major Functions 1-6 from TEACHER PERFORMANCE APPRAISAL INSTRUMENT in evaluation of direct teaching activities.

** adopted by the State Board of Education, July, 1987

Rating Scale
(Please Check)

Superior	Well Above Standard	Above Standard	At Standard	Below Standard	Unsatisfactory

2. Major Function: Managing Public Relations ☐ ☐ ☐ ☐ ☐ ☐

   2.1 Promotes positive staff relationships.

   2.2 Promotes positive student relationships.

   2.3 Maintains a good relationship between school and community.

Comments ______________________________

____

____

3. Major Function: Planning for the Media Program ☐ ☐ ☐ ☐ ☐ ☐

   3.1 Develops annual and long-range plans for the media program based on periodic assessment.

   3.2 Plans with teachers to integrate media skills into the curriculum.

   3.3 Designs motivational activities to promote reading.

   3.4 Plans a schedule that allows for both instruction and collection development within administrative guidelines.

Comments ______________________________

____

____

Rating Scale
(Please Check)

Superior	Well Above Standard	Above Standard	At Standard	Below Standard	Unsatisfactory

4. Major Function: Managing Resources ☐ ☐ ☐ ☐ ☐ ☐

4.1 Provides leadership for the Media Advisory Committee.

4.2 Analyzes the collection to determine needs.

4.3 Uses standard selection tools and practices to evaluate and select all instructional materials.

4.4 Coordinates the acquisitions process.

4.5 Insures accessibility to resources.

4.6 Offers a variety of instructional resources to meet curriculum objectives and learning styles.

4.7 Administers the media program budget.

4.8 Promotes the use of current technologies.

4.9 Maintains media resources.

Comments ______________________________

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5. Major Function: Managing the Facility ☐ ☐ ☐ ☐ ☐ ☐

5.1 Has organized media center so that areas are identifiable.

5.2 Support areas are organized.

Rating Scale
(Please Check)

Superior	Well Above Standard	Above Standard	At Standard	Below Standard	Unsatisfactory
☐	☐	☐	☐	☐	☐

5.3 Provides an environment that reflects the multiple goals of the media program.

5.4 Considers health and safety regulations when arranging facility.

5.5 Facility organized for efficient circulation.

Comments ______________________________

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6. Major Function: Professional Responsibilities

6.1 Upgrades professional knowledge and skills.

☐ ☐ ☐ ☐ ☐ ☐

6.2 Provides growth opportunities for staff and students.

6.3 Carries out non-instructional duties as assigned and/or as need is perceived.

6.4 Adheres to established laws, policies, rules, and regulations.

6.5 Submits accurate reports promptly.

Comments ______________________________

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RECOMMENDED JOB DESCRIPTION FOR COMPUTER COORDINATOR

Title: Computer Coordinator/Supervisor
Location: System-level or School

The Computer Coordinator is primarily concerned with the development, implementation, operation, and evaluation of the instructional computer education program for the school system or an individual school or group of schools. This individual will typically have the following responsibilities:

1. Provide leadership for short and long-range planning for computer education: goals, program activities, staffing, and budget.

2. Assist the building educators in implementing the system or school computer/technology plan.

3. Plan, develop, and implement staff development activities to meet established computer education needs, competencies, and certifications.

4. Develop and teach model instructional activities for students and/or staff.

5. Work with other instructional specialists/supervisors in identifying and/or developing computer-based materials and activities for integration in the ongoing instructional program for all curriculum areas.

6. Be knowledgeable of the hardware configurations and computer-related items on state contracts.

7. Assist with the selection and purchase of equipment, courseware, related media, and supplies for computer-instructional and computer-management activities according to the system-level computer/technology plan and purchasing guidelines.

8. Provide assistance to microcomputer users in resolving ordering, service, and/or support problems.

9. Conduct evaluations of the computer education program and inventories of the equipment and related materials.

10. Plan and coordinate the implementation of special computer education activities: computer competency assessment; Computer Learning Month; vendor demonstrations, site visits; contests; summer camps; open house programs; etc.

11. Serve as a clearinghouse of information on trends, research, applications, and effective practices related to the use of microcomputers and related technology in the school program.

12. Serve as a system or school contact for communication with the North Carolina Department of Public Instruction staff in the Division of Media and Technology and with the school system administration and community.

System-Level APPENDIX

- Professional Collection G-1
- Thinking About Centralized Processing? G-3
- Tips for Effective Staff Development Programs G-5

PROFESSIONAL COLLECTION

.:.GETTING STARTED.:.

- Involve teachers and/or administrators in the selection process. Survey your potential readership to see what their interests and needs are.

- Place the professional collection in a convenient location; consider branch collections in such places as the teacher's lounge or departmental offices.

- Assist your clientele in using the professional collection. Be prepared to help them with their research.

- Publish lists of new acquisitions with brief annotations.

- Arrange for periodic reviews of books and other materials by local experts, i.e., teachers and administrators.

- Arrange for available and adequate time for use of the facility--extended hours.

- Devise a system of routing new materials to staff members (see below, "Using the Journal Collection.")

.:.USING THE JOURNAL COLLECTION.:.

Simply collecting the best or most well-known journals for the professional collection does not guarantee that they will be read and used. Use of the professional collection by all staff members can be increased by a system of notification to individuals about recent acquisitions. A CURRENT AWARENESS system to keep staff apprised can take one of several forms: the Journal Approach or the Subject Approach.

.:.The Journal Approach.:.

- Publish and circulate a list of subscription titles with a "choice form" so that staff can indicate their journals. of interest. As the new journals arrive, copies of the Tables of Contents are sent to staff members.

- After patrons have indicated their interest in individual articles on the Table of Contents pages, either check out the journal to them or make a copy of the article(s) requested and send.

- If time or funds are a problem, a copy of the Table of Contents can be posted on the bulletin board in the media center, outside the central office, in the lounge, etc.

.:.The Subject Approach.:.

- Solicit education topics of interest from professional staff members or use a pre-selected list of topics that are likely to be covered in the subscriptions in the collection. Assign code numbers to the topics. Circulate the "choice sheet" of topics to the staff.
- Review the journals and other materials as they are received and assign the designated code number to individual articles.
- If a database management system is available, patrons' names and subject choices can be matched to the subject code of the articles and an individualized bibliography for each subscriber generated at monthly (or other) intervals.
- If a computer management system is not an option, a simple card file by subject noting individuals who have chosen that particular topic can be maintained and used. Send a brief notice to patrons as articles are coded.

.:.BUILDING THE PROFESSIONAL COLLECTION.:.

- Collect all recent examination copies of textbooks, or copies of textbooks no longer adopted by the state, to be used as supplemental curriculum materials.
- Buy inexpensive pamphlets (e.g., Phi Delta Kappan Fastbacks).
- Place all professional education books and materials together.
- Ask local organizations and civic groups to furnish appropriate materials and/or financial assistance.
- Use faculty/administrators as best sources of information: if they are taking graduate courses ask them to supply bibliographies, syllabi, etc., that might help in selecting new materials or reference materials.
- Process education materials ordered by individual faculty/administrators centrally so that borrowing locally becomes a possibility.
- Ask all professional staff to participate in a "journal exchange": if they subscribe to a professional journal(s), perhaps they would like to share with others or donate to the professional collection when they have finished reading.
- Use the new book list in the December issue of the American School Board Journal.
- Write to the Department of Education for lists and free publications.
- Check the publications lists from the Department of Public Instruction.

Thinking About Centralized Processing?

(Some considerations prepared by Gayle Keresey, media coordinator, Bladen County Schools)

Some of the benefits of a centralized processing center:

- Media coordinators have more time to plan, teach, and work with students and teachers.
- Needless duplication going into cataloging and processing in each school media center is eliminated, saving time and money.
- Labor saving equipment, materials, and processes can be used that are not feasible in individual schools.
- Duplication of expensive resources and equipment is reduced when processing is centralized, benefiting all schools.
- Uniformity, continuity, standardization, and consistency of cataloging and classification are established and maintained throughout the county media centers.
- Cataloging records are more complete, resulting in better access to resources for students and teachers.
- Substantial savings in time, labor, and money are produced through larger discounts for supplies.
- Utilization of clerks who are experts in the job produces greater efficiency.
- Storage space for processing supplies is not needed in each school media center.
- Materials are processed twelve months per year, which decreases time the materials sit on the shelves, waiting to be cataloged and processed.
- Centralized processing eliminates problems created by inexperienced personnel, such as change of media coordinators.

Some of the potential disadvantages of centralized processing:

- Because cataloging is very time consuming, materials may remain uncataloged for long periods of time. (However, many times these materials would sit in the media center, waiting to be processed.)
- More time may be required to process, catalog, and deliver materials.
- There must be agreement regarding cataloging and processing procedures among media coordinators. (However, a processing center could customize some procedures to fit individual school's needs, if necessary.)

The primary advantage of a centralized processing center is relieving the building level media coordinator of clerical duties, thus releasing her to work with teachers and students. D. Philip Baker, Past President of the American Association of School Librarians states, "Lost time is time away from teachers or students who expect professional services, not lessons in cataloging." (THE LIBRARY MEDIA PROGRAM AND THE SCHOOL, p. 133.) Richard L. Darling summarizes, "It is in better service to students and teachers that centralized technical services most contribute to excellence." (EXCELLENCE IN SCHOOL MEDIA PROGRAMS, p. 98.)

Bibliography

Baker, D. Philip. THE LIBRARY MEDIA PROGRAM AND THE SCHOOL. Libraries Unlimited, 1984.

Darling, Richard L. "District Level Support of School Media Center Programs." In EXCELLENCE IN SCHOOL MEDIA PROGRAMS. American Library Association, 1980, pp. 95-100

TIPS FOR EFFECTIVE STAFF DEVELOPMENT PROGRAMS

Effective Practices Facilitate Adult Learning (Lewis, in press)

- Arrange physical facilities for interaction and comfort. Eliminate glare and hearing/vision barriers.

- Allow time to socialize by planning refreshment breaks, warm-up, and get-acquainted activities.

- Change pace, provide an agenda, and allow time for questions.

- Use self-check materials and participant demonstrations instead of formal tests to assess progress.

- Use large visuals and quality printed materials.

- Organize activities well so that they will not be perceived as a waste of time. Adults have higher expectations than children.

- Use a variety of methods to deliver information and skills because participants will have different learning styles. **Do---Reflect--Share**.

- Integrate new knowledge with what participants already know.

- Provide ample opportunity for participants to practice newly acquired skills. Systematic planning for practice time and follow-up is important. The coaching role becomes prominent.

- Build in opportunities for participants to use decision-making skills.

- Provide time for physical movement between activity segments. Twenty minutes is about as long as an adult can sit comfortably in one place.

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